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INSTITUTIONAL DENTISTRY (INSANE). REPORT NO. 4.

By Frederick A. Keyes, D.M.D., Boston.

Dentistry in public institutions, although of the greatest importance in connection with the welfare of the inmates, has in the past received too little attention. Of late years it is very gratifying to note a growing interest in this matter, which has resulted in at least some sort of effort to give dental care to those under State charge. However, although Massachusetts, as compared with other states, may well be proud of her progress in this regard, she has not by any means attained the degree of perfection for which she is otherwise noted. This article aims to indicate, in a general way, defects which still exist, and to suggest possible remedies. It is based upon the author's personal knowledge of dental conditions in one of our largest institutions, and upon conclusions drawn after careful study of conditions indicated in health reports of superintendents and trustees of others.

My first report of dental conditions in insane hospitals in Massachusetts was submitted to the trustees of the Medfield State Hospital March 31, 1915, followed closely by a second report dealing more minutely with the dental conditions in the institution April 30, 1915. A third report was submitted July 17, 1916. These reports, together with two other monographs on this subject, have been printed in different medical and dental journals since that time.

The first report proved that the teeth of the inmates in public institutions were in a neglected condition, and that very little effort was being made to remedy the situation. Since that time there has been some slight improvement; but there is still room for more. For example, the 38th report of the State Board of Charity in Massachusetts contains many recommendations for legislative action, all of which have been forwarded to the secretary of the committee. These recommendations cover nine closely printed pages, one-half of which are devoted to improving the medical care of patients. In this report, however, there is not one suggestion relative to the dental care of the inmates,—this in spite of the medical report contained therein lamenting the great increase in diphtheria, chicken pox, whooping cough, and tuberculosis in many of the institutions. One of the largest schools for boys reports that "Throughout a considerable portion of the year the organization of this institution has been radically affected by the diphtheria epidemic which broke out in the summer of the year preceding. I became necessary in the absence of adequate hospital and isolation facilities to segregate the cottage group, making each cottage a unit in itself. No communication of any sort between these groups was allowed. As a result, many functions of the school requiring assembly were interrupted. The disease finally disappeared upon the approach of warm weather and after an isolation camp was established at a distance from the center of activity." Another large institution for children reports: "There has been rather more than the average minor sickness this year—mumps and chicken pox have formed an annoying complication to the medical staff, but no serious setbacks resulted." Still another reports: "In mid-winter of 1916 an epidemic of colds and la grippe kept the hospital department filled with temporary cases. At one time, in January, fifty boys, or one-fifth of the enrollment, were in bed in the hospital. This trouble soon abated, however, and the remainder of the year has shown only occasional instances of minor ailments."

It is very interesting to note that no progress from a dental viewpoint has been reported in any of these institutions in the last three years. In fact, the 38th report of the State Board of Charity contains no reference whatever to dental work.

A review of the first annual report of the Massachusetts Commission on Mental Diseases disclosed at least a desire for improving the dental conditions in our institutions for the insane. An extract from the report of the superintendent of one of our insane hospitals, quoting the amount of work done by the visiting dentist offers this suggestion: "That our patients have need of the constant attendance of a dentist and it is hoped that we may be able to extend the service to full time instead of two half days a week as at present." Another superintendent is quoted in this report as follows: "The teeth of the majority of our patients are in a deplorable condition and I again recommend that a resident dentist be added to our force and that $800 be appropriated for that purpose." A general statement under the heading, "Progress in Institutions," states that "practical dental work has been largely increased in several hospitals." This report, then, shows that some definite steps have been taken in the right direction.

In state prisons and reform schools, conditions at present show a decided improvement over those previously reported, but there is still room for greater improvement as the following quotation from a superintendent's report will show: "The oral conditions of the inmates are very poor, and as the dentist gives only one day a week it is not possible for her to see each woman as she is admitted and treat all cases thoroughly."

In lying-in hospitals affairs are still in the old chaotic state.

Let us consider now conditions in general hospitals. It is true that dentists have been appointed to the staffs of many of our hospitals; but the work done by them, in most cases, is purely emergency, and not much of that. The out-patient clinics of these hospitals are still continuing the splendid work which they have always done. But real coöperation of dentist with surgeon and medical man,—for example, in preparing patients' mouths before laparotomies where possible,—not as yet exist.

In institutions for the care of tuberculosis there is still agitation for dental work, but little has been accomplished.

In state industrial schools, orphan asylums, etc., conditions are deplorable. Spasmodic attempts at improvement have been made, without any evident progress. Most of these institutions have a visiting dentist who "stops a tooth-ache or pulls a tooth when needed." Systematic dentistry, where each child is examined carefully and all decayed teeth extracted and all carious cavities filled, does not at present exist. It seems that the mere appointment of a visiting dentist to the staff of one of these institutions covers the law and conveys the impression that the institution is showing a lively interest in the care of its inmates. But investigation would prove conditions similar to those found elsewhere.

From this brief analysis of dental conditions one is forced to conclude that there has been very little interest or progress in the majority of our public institutions.

Is it possible, then, that the modern theory of focal infection is wrong? Surely, superintendents and physicians in our public institutions are not familiar with its importance if they persist in neglecting the mouths and teeth of those under their charge. Granted that they do believe in focal infection, do they feel that these patients are receiving adequate protection if they neglect their dental care?

The one encouraging report of all these is found in institutions for the insane. An example of the possibilities for improvement in this direction may be found in the Medfield State Hospital. My examination of the inmates at this hospital, in April, 1915, disclosed the following conditions:

Total number of patients examined	1697
Number of cases of pyorrhoea	330
Number of cases of patients needing extraction	680
Number of cases of acute alveolar abscesses	72
Number of patients with carious teeth	150
Number of patients in need of both upper and lower dentures	270
Number of patients in need of full upper dentures	201
Number of patients in need of full lower dentures	30
Number not examined	28
Number of cases needing cleaning (all with the exception of two and those edentulous patients)	
Number wearing plates	40
Number of cases of stomatitis	30
Number of cases of cleft palate	1
Number of cases of harelip	1

My report to the trustees which followed offered the following remedial suggestions:

1. A resident dentist, or
2. An increase in the hours of the visiting dentist, or
3. Two visiting dentists.
4. Examination and tabulation of work by the card index system.
5. A supply of tooth-brushes and powder, and the enforced use of the same.
6. That extraction be done before any other work.
7. That the use of emetin hydrochloride for pyorrhoea be discontinued at the hospital.
8. That edentulous patients be supplied with plates.
9. A new equipment for the dental infirmary.
10. The assignment of two nurses as assistants to the dentist.
11. Lectures to nurses on the importance of dental hygiene.
12. The training of one nurse to clean teeth.

Of these twelve suggestions, all of the most important ones were carried out to the letter. The institution has now had a resident dentist for over two years, and this is the only possible way in which the teeth of the inmates of large institutions can receive proper attention. The card index system has proved very valuable. Tooth brushes and powder have been more abundantly supplied than ever before. Extraction has been done on all patients first, and plates are gradually being supplied to edentulous patients. We have at present a well-equipped dental infirmary.

The twelfth suggestion, relative to the cleaning of teeth by a nurse, has not as yet been carried out. After careful consideration of the matter I purposely discouraged it. Some of our institutions which have visiting dentists have employed the so-called dental hygienist to clean teeth. This is certainly a most illogical procedure, unless such an institution has also a resident dentist who has first completed all necessary extractions and fillings. For surely it is a waste of time to clean the teeth of patients who have dirty roots, broken down teeth, abscesses and cavities, without first remedying these defects. When all these diseased conditions have been remedied, then the cleaning of teeth is purely a hygienic measure. In Medfield, after two years' trial of resident dentists, who accomplished an enormous amount of dental work, we still find enough of the important work—extracting, filling, etc., to keep us occupied indefinitely. Under these conditions, then, a dental nurse wholly occupied in cleaning teeth in a large institution, while the visiting dentist spends but one or two mornings a week doing emergency work, is an absurdity and a waste of time. From a financial viewpoint, also, there is no basis for the employment of a dental nurse. A dental nurse receives, I understand, $40 a month and maintenance. The visiting dentist, for one or two mornings a week, receives $10 compensation per week. Therefore, the yearly salary of both is $1,000, which is more than the resident dentist at Medfield receives for full time work. To recapitulate, then,—until such time as every institution employs a resident dentist, and until we have eliminated the enormous amount of septic conditions in patients' mouths, the dental nurse is purely ornamental. As a teacher of general dental hygiene, or as an officer to enforce the use of the toothbrush she might be of some use, but, even then, not much more so than any competent nurse or attendant.

A report of dental work done by our first resident dentist at Medfield for one year is as follows:

Dear Dr. Keyes:

I have been requested by the Superintendent, Dr. Cahoon, to submit to you for examination a report of the dental work accomplished in the past year, and the present conditions in the Medfield State Hospital. The chart system and the individual cards have been followed out, which show precisely the present conditions as compared with those of a year ago.

The conditions I found here were very discouraging. The old office was situated in the B-1 ward. The room contained, among many other things, an old plush chair, a broken, old-fashioned foot-engine, a small bedroom table with about a dozen ancient operative instruments and an oil lamp with a rusty pan for sterilization.

I immediately furnished the place with all of my personal instruments, both operative and laboratory, which I had fortunately brought with me and which were absolutely necessary to accomplish any work at all. This office was used from September 1st until December 1st, when the new office in the infirmary was opened. I have endeavored to equip the new office in a practical and attractive manner, which now contains the following furnishings so necessary to accomplish the great body of work continually presented:

a. An electric engine with slip-joint hand pieces.
b. A "Harvard" dental chair.
c. A "Clark" fountain cuspidor.
d. An aseptic bracket table.
e. A new "Harvard" instrument cabinet.
f. An electric sterilizer.
g. A bracket dental light for operative work.
h. A novocain jar for sterilization of cups and syringes.
i. A desk where records are filed.
j. Rug, screen, couch, chair, chair coverings, sanitary cups, mirror, hat rack, dental napkins, etc.

In the basement a work bench has been furnished and I have equipped same with all necessary laboratory apparatus. It was at first considered an impossibility to accomplish much among this class of patients in this particular work, but contrary to expectations, the results have surpassed by far even our greatest hopes. The patients have been eager to obtain any dental treatment possible and prove their interest by their coöperation in the work in the wards, their promptness in appointments at the office, their conduct in the chair and their enthusiasm and extreme gratification for the work done for them. Some of the most violent patients have conducted themselves in a decidedly unexpected and actually excellent manner in the dental treatment.

The greatest part of the year has been spent in treating the patients suffering from acute alveolar abscesses and swollen painful teeth. Such cases are reported daily by the visiting physician and these are given immediate attention, thus eliminating the unnecessary suffering and possible facial disfigurement in awaiting the arrival of the day when the visiting dentist would come.

Novocain has been used for extractions and ether resorted to when necessary. The need of a nitrous oxide and oxygen apparatus is great, as too much unnecessary suffering is forced upon the patients and extra labor upon the dentist without this anaesthetic.

Scaling the teeth, the first and greatest necessity, has been done in the active cases of pyorrhoea.

Tooth powder is supplied in large cans to each ward and the charges instructed to have them filled when necessary. Collapsible tin tubes have been furnished and filled with tooth paste, this form being better appreciated by the female and younger patients. These tubes also are refilled and returned to the patients.

When actually necessary, attendants are allowed first aid treatment and extractions. This factor also eliminates the necessity of losing them from their work and the unnecessary inhuman treatment imposed upon them in endeavoring to find relief by travelling three or more miles to some surrounding town, trusting to find a dentist who would give them attention.

Plates can now be furnished and repaired at a very small expense. Ill fitting plates are found in the mouths of some of the most violent patients who often do not wish to give them up temporarily for repair in fear that they will never have the use of them again. Many patients have only one plate while the opposite jaw contains no teeth or plate to articulate with, but they still manage to retain them even in such condition.

Visiting dentists in the past have been paid $10.00 per day and expenses. Only emergency cases were then treated as the preceding dental conditions allowed only such work. A plate or crown made for a patient was considered a special case for which the dentist was paid, in addition, the usual fee of twenty or twenty-five dollars for the former and eight or ten dollars for the latter. Plates and crowns are now furnished at a minimum cost; the output of plates and repairs justify in this one factor alone the economy and satisfaction evidenced in the daily work as a resident dentist.

All boarding out patients are brought in by the social worker to the institution for dental treatment and the necessary work done for them as for the regular hospital patients. The present conditions and the success of the past year give me confidence and I expect to meet successfully the great amount of work ahead.

I wish to express my appreciation for the co-operation and interest of the Superintendent, Doctor Cahoon, and the members of the staff in the work which I have undertaken with them.

I also wish to express my appreciation to you, particularly for the untiring effort you have shown in the past three years to better the oral conditions not only in this institution but in all other institutions throughout the state.

The statistics of dental work done by me are as published below:

Total number of patients examined		1697
Number of extractions		
Female side	2730	
Male side	1434	4164
Number of acute alveolar abscesses treated and cured		58
Number of cases treated of chronic suppurative alveolar abscesses discharging externally through fistula		8
Number of cases of pyorrhoea treated		59
Number of fillings inserted in carious teeth		383
Number of exposed pulps, removed by pressure anaesthesia		30
Number of root canal fillings		79
Number of patients supplied with full upper dentures		39
Number of patients supplied with full lower dentures		14
Number of plates repaired		64
Number of patients resisting		0
Number of fractures		0
Number of gold crowns made		8
Number of bridges	4 tooth	1
	5 tooth	1
Number of artificial replacements for attendants through accidents by patients		4
Number of cases of stomatitis treated		25
Number of cases of cleft palate		1
Number of cases of hair lip		0
Number of prophylaxis given		524
Number of cases of amputation of diseased root ends		2
Number of cases of diseased maxillary antrum		1

Various emergency cases at all times for odontalgia and neuralgia.

Respectfully submitted,
JOHN D. THOMAS, D. M. D.
Resident Dentist.

The progress in dental conditions noted by Dr. Thomas in his report is very encouraging and shows the hearty coöperation which the trustees and superintendent are extending to the resident dentist. Dr. Thomas was commissioned in the United States Army Dental Corps and resigned from Medfield October 5, 1917 He was succeeded by Dr. Schlichte, whose work was as follows:

Number of extractions	910
Number of acute alveolar abscesses treated and cured	22
Number of cases treated of chronic suppurative alveolar abscesses discharging externally through fistula	2
Number of cases of pyorrhea treated	71
Number of fillings inserted in carious teeth	55
Number of exposed pulps, removed by pressure anaesthesia	8
Number of root canal fillings	11
Number of patients supplied with full upper dentures	19
Number of patients supplied with full lower dentures	8
Number of plates repaired	21
Number of patients resisting	1
Number of fractures of mandible	1
Number of gold crowns made	0
Number of bridges	0
Number of artificial replacements for attendants through accidents by patients	5
Number of cases of stomatitis treated	5
Number of prophylaxes given	195
Number of cases of amputation of diseased root ends	0
Number of cases of diseased maxillary antrum	0
Various emergency cases at all times for odontalgia and neuralgia	1

Dr. Schlichte resigned March 20, 1918, and also entered the Army. He was succeeded by the present resident dentist, Dr. William A. Milliken.

Added to the statistics of Dr. Wade, who was appointed visiting dentist in 1915, while the question of a resident dentist was being considered, we find the following grand total of work done in the last three years:

Number of extractions		7355
Number of acute alveolar abscesses treated and cured		93
Number of cases treated of chronic suppurative alveolar abscesses discharging externally through fistula		10
Number of cases of pyorrhoea treated		71
Number of fillings inserted in carious teeth		445
Number of exposed pulps, removed by pressure anaesthesia		38
Number of root canal fillings		90
Number of patients supplied with full upper dentures		58
Number of patients supplied with full lower dentures		22
Number of plates repaired		85
Number of patients resisting		1
Number of fractures of mandible		1
Number of gold crowns made		8
Number of bridges	4 tooth	1
	5 tooth	1
Number of artificial replacements for attendants through accidents by patients		0
Number of cases of stomatitis treated		30
Number of prophylaxes given		767
Number of cases of amputation of diseased root ends		2
Number of cases of diseased maxillary antrum		1
Various emergency cases at all times for odontalgia and neuralgia		
Number of cases of necrosis of mandible		1

My last examination of the patients at Medfield showed the following conditions:

	April, 1918
Number of cases of pyorrhoea	203
Number of cases of patients needing extraction	160
Number of cases of acute alveolar abscesses	0
Number of patients with carious teeth	41
Number of patients in need of full upper dentures	166
Number of patients in need of full lower dentures	49
Number of patients in need of both upper and lower dentures	301
Number not examined	6
Number of cases needing cleaning	426
Number wearing plates	89
Number of cases of stomatitis	5

If, after two years of intensive treatment by resident dentists the Medfield State Hospital presents this amount of work still to be done, surely institutions which have not as yet employed a resident dentist must be held responsible for gross neglect. What are we to expect from these institutions in the future? Will they follow the example set by Medfield, or will they remain on their old haphazard, impractical basis? The present slip-shod individual work which is being done by institutional dentists, however well intentioned, will never be successful until it is thoroughly unified, supervised and systematized.

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NECK INJURIES.

By Herman W. Marshall, M.D., Boston.

The following selected cases will serve to illustrate certain obscurities still to be found among injuries of the neck; and a brief discussion of a few points in diagnosis and treatment follows the clinical histories given.

Case 1. A 47-year-old farm laborer was thrown from a wagon and landed against a wooden framed gate covered with wire netting. He cut his forehead and had the scalp wound sewed up within a few hours. He was not rendered unconscious, although he landed on his head, but he has not been able since to open his mouth widely.

X-rays of his skull were taken at one of the Boston hospitals two or three weeks after the accident; and at home he received electrical treatments regularly for many weeks. He did not go to bed at all for six weeks following the injury and slept sitting upright in a chair. In addition to his inability to open his mouth widely, he has had difficulty in swallowing.

At the writer's examination, made 13 weeks after the initial injury, his symptoms were subsiding. He could then move his head in all directions to a limited extent and headaches had subsided, which, at first, had been very severe. No support was worn, but he could not stoop over to saw wood at the time of examination because of dizziness; and he was obliged to sleep on his back on account of discomfort produced in attempting sleeping on his side.

The lower jaw could be opened to one-half its normal range as an extreme limit; and in doing so pains were produced in the suboccipital and frontal regions of the head.

Head motions were restricted as follows: Forward and backward motions were limited approximately one-half. Lateral bending to the left side and rotation of the head to the left were possible through only a few degrees, while in reverse direction toward the right both motions were freer, yet only one-third of normal extent.

Neck muscles were all of average development and were not held rigidly. No bony crepitus was felt when the neck was moved. Tactile skin sensations were normal.

Tenderness to pressure was felt located deeply on both sides of the neck at the mid-cervical level.

X-rays showed a fracture through the base of the odontoid process of the second vertebra with slight forward dislocation of the process. Figure 1 shows the lateral view of the cervical spine in this case, and the original plate shows the fracture positively with some bony union between the fragments apparently.

The patient was lost track of entirely by the writer after this single examination.

Case 2. A 29-year-old Italian laborer was struck squarely on top of the head, as he was walking along, by a brick after it had dropped five stories. He was rendered unconscious for a brief time; and for four months after the accident he was said to have disturbances of vision.

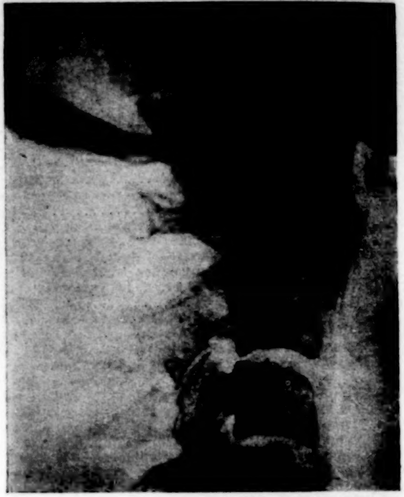

Fig. 1.—Fracture of odontoid process of second cervical vertebra with slight forward dislocation of the fragment.

Several sets of x-rays of the cervical spine taken at one of the Boston hospitals, were decided to be negative. Occasionally a slight clicking was noticed by the patient when he moved his head, comparable, he said, to the clicking of two fingernails against each other. Once, at the hospital, a slight crepitus was felt by the physician in attendance. A supportive Thomas collar was fitted at the hospital four months after the date of injury, because of pain and limitation of motions in the neck.

Thirteen months from time of initial injury, when examined by the writer, he wore a Thomas collar to support his head, and steadied the latter constantly with fingers against chin when the collar was removed for examination. Neck motions were limited as follows: Backward bending was possible through one-half the usual range without much pain, and this motion constituted the principal movement. Lateral, forward and rotary motions were practically completely restricted at the examination. Muscles all showed fair equal development and were held tensely when the collar was not on He claimed that he felt dizzy and faint very soon if he did not wear the collar.

X-rays taken in connection with this exam-

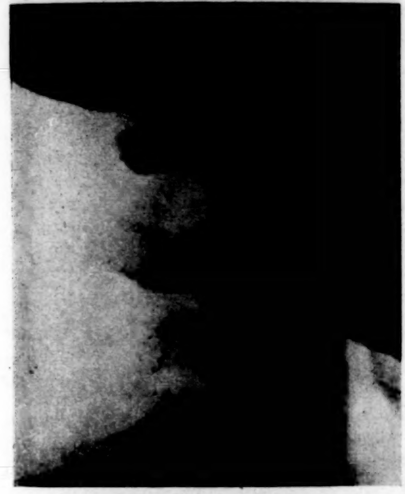

Fig. 2.—Hypertrophic hook on first cervical vertebra, and probable old fracture of lamina of the same vertebra.

ination showed an unusual hook-shaped hypertrophic process at the attachment of ligaments to the bifid spinous process of the first cervical vertebra (Fig. 2). The right lamina of the vertebra presented an appearance consistent with an old fracture of the lamina with union of fragments again without appreciable displacement.

A steel head support which afforded more complete protection increased a little the range of head motions when it was finally discarded. Calcification in the injured ligaments was increased noticeably also in a few months. Eighteen months after his accident, when last seen, he still had on a Thomas collar and still complained of dizziness, nor had he returned to work.

Case 3. A 47-year-old man was in an automobile accident, and was thrown from the car, injuring his leg. He was confined to bed for awhile and on return to work, eight weeks later, he found there was something in addition the matter with his neck. It clicked as he turned his head from side to side, but was not very painful, and accordingly he continued at a regular occupation for a period of more than two years. Then a second injury, received in ascending a low studded stairway, dazed him for a few minutes when he hit the top of his head on an overhead timber. He resumed work for a couple of hours after the injury, before persisting discomfort compelled him to quit, and since then he has not been able to work.

X-rays were taken of the cervical spine after the first injury, but there was no bony defect to be seen.

The writer first made an examination three months after the second injury. The head was held naturally without artificial supports then; but its motions were somewhat limited. He could bend his head forward through one-half its usual range before pain was felt at the base of the neck in back. Backward and lateral ranges of motions were restricted a little, while rotation of the head was practically normal. A curious snapping could be felt in the mid-cervical region with each rotary movement of the head. An inflammatory area, tender to touch, circular in outline, slightly elevated, and nearly the size of the palm of the hand, was situated at the back of the neck with its center at the lower cervical spinous processes. Weakness and numbness in the right hand, also numbness of the left thumb, hyperesthesia of the scalp, and feeling of nausea were complained of. The right hand grip was weak, and there was considerable atrophy of the muscle mass lying to the left side of the median line in the back of the neck.

X-rays of the cervical spine were taken again, and once more there were no demonstrable bony lesions revealed. Treatment instituted immediately through protection for the neck by head immobilization resulted at first in an aggravation of the symptoms from too much tilting backward of the head with a Thomas collar. A steel head support, which fixed the head more immovably and in better position on shoulders and body, controlled the situation, however, and allowed symptoms slowly to subside; yet not until the latter had assumed grave significance with increasing nausea, increasing weakness of arm muscles, spreading numbness in the left hand and slight dragging of his foot in walking.

He left the writer's care to go to another part of the country; but was heard favorably from, with leg weakness gone, strength of arms increasing and nausea abated. He explained, too, that he had noticed his "Adam's apple" had become more immovable again, whereas at one time it could be pushed or stretched away from its normal location to an unusual degree. He still had some atrophy of posterior neck muscles and continued to wear the head support.

A diagnosis of a fracture of a lamina of one of the lower cervical vertebrae was made in this case from the clinical history, even in face of negative x-ray findings. Evidently there developed abnormal pressure upon the cervical spinal cord, and in the presence of an abnormal chronic inflammatory area at the base of the neck behind, with clicking crepitus, and history of injuries, it seems clear that the first accident probably fractured the lamina, while the less severe second accident started up a traumatic swelling locally which continued to increase because no rest for the neck was permitted the second time, as after the first injury. Instead, ordinary movements of the head were allowed unconsciously to continue to aggravate the local oedema until pressure within the bony spinal canal and visible swelling externally developed.

Case 4. A 48-year-old Sicilian woman was standing with head bent at her occupation of candy packer. A machinery belt overhead broke and struck her on the shoulder and neck, knocking her down. She was taken to the Haymarket Relief Station in Boston, and a month later visited another Boston hospital with alleged severe pain associated with all neck movements. A Thomas collar was fitted in the hospital, and x-rays taken there were negative for bony injury in the cervical region. Additional x-rays, taken elsewhere three months after the injury, seemed to show a very slight dislocation of the third cervical vertebra. X-rays taken again one year and eight months after the accident, were judged to be wholly negative; but, nevertheless, the patient continued to complain of neck soreness and wore a dilapidated Thomas collar. She presented a pitiful appearance,—a tiny, wrinkled Italian woman with an old shawl over her rounded, stooped shoulders, with head bent, and the latter partly supported by her hand. An examiner, meeting her for the first time at this stage, advised sending her to a hospital for extension treatment in bed, followed by baking and massage and a properly fitted Thomas collar. This advice was not followed, because the insurance company which had been paying compensation for her disability ascertained from her neighbors and tradesmen that she appeared normal enough at home, that she did not wear the Thomas collar there, and that she had the daily care of a number of small children, doing all the things an uninjured individual could do.

The diagnosis of this case must be, therefore, an injury to the neck complicated by subsequent malingering. The writer was fooled at first, like all other doctors have been, at her first appearance; but it should be mentioned that in his last examination, one year and eight months after the accident, the medical opinion rendered independently of insurance company data, was that she obviously had become a malingerer. It was possible, through familiarity with her history and clinical progress to detect the falsity of her later complaints, in spite of her pathetic appearance and skillful acting.

Case 5. A 35-year-old man, roofer by occupation, fell from a roof when a staging broke. He dropped over the eaves to the ground, a distance of 25 feet, and fractured two ribs, besides injuring his neck. He could crawl away himself from the spot where he landed, and he lay on the grass nearby until taken directly to a hospital. There he remained two or three weeks and was fitted with a Thomas collar.

At the examination made by the writer one year and five months after the injury, he still complained of stiffness and soreness in the neck, also dizziness when he stooped in trying to work. Motions of his head, after one year and five months, were restricted as follows: Lateral bending to the right side was limited to twenty degrees, left side to twenty degrees. Rotation to right side was restricted to thirty degrees, left side to forty-five degrees. Forward bending was limited one-third and backward bending of the head was restricted two-thirds. There were no muscles visibly atrophied, no bony crepitus felt when the neck was moved, and no localized tenderness to pressure in the cervical region. Pain and soreness were referred by him to the occipital region when he moved his head, and he stated these symptoms were worse on the right side.

The spinous process of the second cervical vertebra was very slightly more prominent than usual; and this appearance taken in connection with x-ray appearances, namely an unusual curve formed by the anterior surfaces of the bodies of the cervical vertebrae (See Fig. 3) suggests a slight dislocation between first and second cervical vertebrae. The idea is

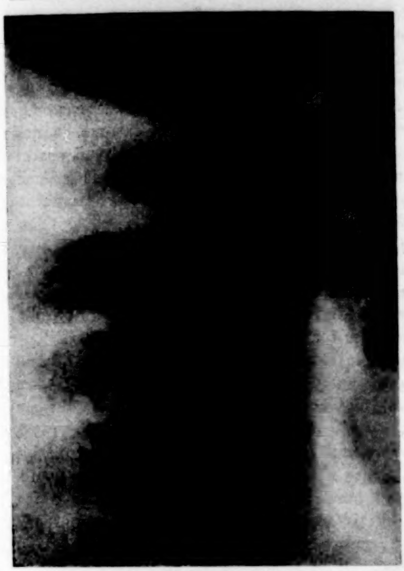

Fig. 3.—Injury to cervical spine with probable partial rupture of some of the ligaments near base of skull. Slight derangement in alignment of bodies of upper cervical vertebrae.

further borne out by the antero-posterior x-ray view taken through the open mouth, which demonstrated an apparent slight lateral tilting of the first vertebra in its relations to the odontoid process.

Two interesting conditions existed in this patient's neck apart from the injury. There was noticed an enlargement of the thyroid gland that had been recognized first after he had been having baking and massage for several months regularly to relieve neck stiffness. These physical therapeutic measures, radiant heat from electric light bulbs with manual manipulations and massage were continued for eleven months. As a result the neck had limbered up a few degrees apparently in every direction. After physical therapy had been stopped the patient stated that swelling of the thyroid gland appeared to diminish somewhat; but it still existed at the time of the writer's examination.

The cause of abnormal increase in size and diminution again in size of the gland can be plausibly explained at least by the prolonged very thorough treatment with mechanical therapy and radiant heat. Administrations perhaps produced increased activity within the thyroid and cessation allowed subsidence of thyroid tissue activity again.

Hypertrophic changes are to be noted in the x ray (Fig. 3), on the anterior margins of the bodies of the third and fourth cervical vertebrae. The significance of these overgrowths and calcifications in the neck, as elsewhere in the bony framework, probably mean local impairment in physiologic function of the affected tissues. Beginnings are seen here which are liable to increase as the result of the injury received, until the neck becomes stiffer and permanently limited in its motions. One such patient the writer has seen had his neck stiffen completely in five years, following a severe neck injury, despite all treatment which was tried. A prognosis has been hazarded with this patient, therefore, that he will have considerable permanent stiffness as the result of his accident, because his symptoms are now increasing a trifle rather than abating at the end of seventeen months.

DISCUSSION.

Correct interpretations of clinical findings and of x-ray appearances in neck injuries require balanced judgment of different factors entering into each situation, just as surely as correctly balanced comprehensive views are needed for right understanding of appearances found in lower parts of spines. Precise knowledge of anatomy alone, while indispensable, never is sufficient for most accurate estimations of physiologic balances between the bones on the one hand, and on the other hand ligaments and muscles which respectively bind them together and move them.

In the neck, as in the lumbo-sacral spine, strengths of individual muscles and strengths of ligaments cannot be directly measured by clinical means. Reliance has to be placed, therefore, in part upon subjective symptoms, changes in feelings of strength or weakness, degrees and rates at which such changes have occurred.

Occasionally loss of strength from muscle atrophy can be judged objectively and greater dependence can be placed upon such data. Subjective symptoms, although very unreliable often, cannot be ignored as long as they are the only indicators of important physiologic functions, and especially as it is possible with practice to learn to discard the most unreliable ones.

Attention should be called again to the fact that matters of most vital importance in every case are degrees of normal physiologic function which are possible, not anatomical variations or defects, except as the latter indirectly influence the former through the existing physiologic balance between bones and their flexible supports. For good functional capacity sometimes is possible with decided structural peculiarities because muscles and ligaments hypertrophy and compensate perfectly for the latter inequalities.

X-rays of cervical spines demonstrate their positive values in instances of dislocation, fracture, and of bone disease so often that it is needless to emphasize their great importance. The patient first mentioned above, with a fractured odontoid process, for illustration, obviously needed an x-ray before any neck manipulations were attempted. Negative x-rays of cervical spines do not always indicate injuries of minor importance; because there are occasional instances in which fractures cannot be identified on the plates at all, as in case three, cited above, or in case two, where an old fracture can be reasonably suspected without ever being absolutely proved only after a long period.

Negative x-rays with severe ligamentous strain in presence of existing hypertrophic bony changes do not necessarily signify a favorable prognosis. On the contrary, if hypertrophic changes represent serious wear and tear of past events and past time on the neck tissues, then the new trauma received is likely to start an increasing stiffness despite treatment.

Treatments for neck injuries have, therefore, to be broadly conceived, and hypertrophic tendencies combated with internal medical measures, as far as possible, and modifications of diets to improve faulty vascular conditions which accelerate hypertrophic processes. Circulating blood should be given proportions in its constituents as far as practicable which are most favorable for quick repair of the damage to neck structures.

Local treatments, consisting of orthopedic supports combined with mechanical exercises or manipulations continue to be most effective; and degrees of effectiveness are dependent upon skill with which these two physiologically opposite measures are varied and united to suit individual needs of cases. Other forms of physical therapy such as electricity, moist heat, radiant heat, are useful for superficial muscular stiffness at times, but do not reach deeply situated ligaments satisfactorily that are strained.

"One-idea" diagnoses and treatments constitute an increasing menace to successful management of cases as refinements of extreme specialization are allowed not infrequently to obscure fundamental principles of physiologic balances involved, and as special measures are prescribed in one-sided ways.

Periods of disability following neck injuries depend upon the severity of the trauma received, age and general condition of the patient, and on the kind of treatment given. There are possibilities for so many variations in each of these variable elements that generalizations are unsatisfactory. It can be said, however, that several months are needed usually with the majority of patients for recovery from moderately severe neck injuries. Partial permanent disabilities are not extremely uncommon, and, on the other hand, quick complete recovery in a few weeks is occasionally possible after apparently very severe accidents.

CLINICAL OBSERVATIONS IN RECENT EPIDEMIC OF INFLUENZA.

BY SAMUEL W. MYERS, M.D., BOSTON.

THE epidemic lasted, in my part of the city, roughly speaking, about a month, September 16 to October 16, 1918. The greater number of cases occurred in the first two weeks and then gradually subsided. Proportionately more patients developed pneumonia in the last two weeks than in the first two weeks. During this time I ~~have treated~~ approximately 250 to 500 patients, most of them from the beginning to the end.

A remarkable feature of the epidemic was the mildness of the infection as it occurred in children. Only two children had pneumonia. All children recovered. Only a few children had gastritis as a complication.

Another remarkable feature of this epidemic was the almost entire absence of any other disease. Only three patients had follicular tonsillitis, three had diphtheria, one true pneumococcus lobar pneumonia in an elderly man, and practically little else aside from these. Everything was influenza. I saw very few who could be helped by Christian Science.

Symptoms. They all complained of headache dizziness, chilliness or fever; rawness or tearing sensation of the throat; heavy, tired feeling of limbs; pain in the lower region of the spine; cough was generally present.

Diagnosis was easy. They all had laryngitis or tracheitis, which was evidenced by the husky voice and hoarseness. Coryza was present in some. In contrast to a normal appearance of the tonsils and the pillars the uvula was either red or bluish-red. There was fever and increase in the rate of the pulse. Prostration was marked from the start. The respiration was feeble and shallow at the bases and often accompanied by atelectasis until the patient was made to breathe deeply. This may account, in part, for the tendency in many of these cases to pneumonia. There was a vaso dilatation of the skin, manifested by a purple to a bluish color of the skin associated with edema.

On the face, in a marked case, the redness over the cheeks and the bridge of the nose gave it almost the "butterfly" appearance and distribution of erysipelas. In a mild case there was only just blushing of the tip of the nose and *alae nasi*, and perhaps, also, a little on the central part of the forehead, the middle of the chin, and the middle of the upper lip. This predilection for the central part of the face made me look to see if there was anything corresponding to it in the mouth or throat. In the cases that I have studied, I have found either marked redness or a violet red appearance of uvula with edema. To elicit this sign the uvula should be observed by depressing the tongue very gently, care being taken not to cause the patient to gag.

Setting aside the cases of chronic pharyngitis and associated redness of the tonsils and uvula, the latter, normally, has either a pale or a whitish-red appearance. The markedly red uvula was especially suggestive in mild and abortive cases, where it was difficult to know whether the patient was merely frightened, fatigued, or really sick.

Such patients simply complained of slight headache or fatigue. The temperature was below 98. The pulse normal. Subsequent study of these cases proved them to be mild cases of influenza. There was usually a slight rise of temperature after patient was put to bed.

Complications. Bronchitis was the most common, or a part of it, from the start. Next in order was gastritis, or a gastric type of influenza. Thirdly came pneumonia. Nose bleed occurred often during the stage of fever or during convalescence. It was generally unilateral. Albuminuria was not an infrequent complication. Otitis media I have seen only in two cases in adults, and one in a child. I had one case of empyema. I have not encountered very acute sinusitis.

The disease was aggravated, prolonged, or caused to relapse, by too early leaving of bed; inattention to the bowels, too early recourse to solid food, or excitement from company. In my opinion too much covering of patient, or fear of drafts also did harm.

Bronchitis was present from the start, or developed in the major portion of cases on the second or third day. It was marked by râles at the bases or throughout the lungs.

Gastritis. No distinct gastro-intestinal type of influenza was met, there being only gastric symptoms, but no intestinal symptoms. Gastritis in these cases developed either during the stage of fever, or else during convalescence. It was marked by nausea, vomiting, or abhorrence of food. Objectively, this was evidenced by local tenderness in the epigastrium. A few of these cases were associated with albuminuria.

Pneumonia. This was the chief complication. The infection localizing itself as a catarrhal process in the respiratory tract, causing a toxin which depresses the respiration, either directly by action upon its center in the brain, or indirectly by exhaustion, the patient soon falls an easy prey to pneumonia.

It usually set in between the third and fifth day and lasted from three to ten days. Any patient who had fever more than five days generally developed pneumonia. This complication was diagnosed very early, generally a day sooner than hemoptysis appeared. It is my impression that this was a more serious complication in patients who did not get to bed soon enough in the course of the disease; or, in those who suffered a relapse after leaving their bed too soon.

Objective Symptoms. Rise in fever, rapid respiration, cyanosis and local signs in chest. Pleuritic pain to require strapping of chest occurred only in two cases. There was either an area of dullness, bronchial respiration, or an area of localized coarse crackling râles. Consciousness was generally maintained through the entire course of the pneumonia. As in ordinary influenza, exhaustion was its chief characteristic. In one case I suspected bronchiectasis from the foul odor of the sputum raised, but was unable to follow the case. The consolidation was evidenced by quickly spreading dullness, usually of the lower part of the back; either on the right or left side of the chest. The bronchial breathing was not always heard over the entire area of dullness. Over part of this dullness there were areas of localized coarse crackling râles. Bronchial breathing was often of a faint and distant type. Vocal and tactile fremitus were not always as marked as in ordinary pneumococcus lobar pneumonia. Consolidation in these cases was probably often a confluent broncho-pneumonia, probably accompanied by pleurisy. Consolidation was very often bilateral.

Albuminuria. A high tension pulse called attention to this and the urine showed albuminuria. Time did not permit a microscopic examination of the urine, but all patients treated as if for nephritis, the albumin in the urine disappeared and the tension in the pulse became normal.

Treatment. As prostration was the marked feature of this epidemic of influenza, therefore the principle of absolute rest was the basis of treatment. Patients were therefore put to bed and kept there at least three days after fever had entirely left. Not even for the purpose of going to the toilet was any patient permitted to leave his bed. After pneumonia a patient was kept five to seven days in bed with a normal temperature.

Two or three windows had to be open in the room. The patient was lightly dressed and lightly covered. The sponge water bath was found more effective than alcohol sponging. Patients were instructed to sit up high on pillows and breathe deeply a few times a day. Patients were forced to take much fluid and nourishing liquids.

I have found phenacetin to be more effective than aspirin in reducing fever and aborting the disease in adults. Only in a few obstinate cases did I find occasion to combine it with aspirin. In children, however, owing to the milder type of the disease and the depressant effect of phenacetin, I have used aspirin instead, with good benefit. In a few obstinate cases in children I combined aspirin with phenacetin. Brandy was combined with phenacetin or aspirin. Where there was a tendency to weakness of the pulse I combined caffeine in large doses from the start. To combat a tendency to gastritis I have used sod. bicarbonate in all my powder prescriptions.

To prevent the development of pneumonia I have used, from the first, stimulating expectorants of the ammonium type wherever there was the slightest bronchitis. Where pneumonia developed, the stimulating expectorant was continued. Digitalis and caffeine were used with the first tendency of the pulse to weaken or become rapid.

Narcotics and sedatives were used without hesitation to ease the cough or induce sleep. The bowels were kept open not only by enemata, but by laxatives also.

Gastritis was treated by counter irritation, opiates, alkalis and diets.

A few blood pressure readings were made. One patient with pneumonia showed a systolic blood pressure of 80 and a diastolic which could not be read. Many of the very ill patients during convalescence showed a blood pressure below 105, and the second pulmonic sound was weaker than the aortic. It is my opinion that toxin depresses first the vaso-motor system, next the respiration, lastly the heart.

Mortality. All those who stayed in bed or developed pneumonia while staying in bed recovered. A few extreme cases will illustrate this point:

The patient with the very low blood pressure recovered. One patient was so severely effected by his pneumonia that he actually suffered from air-hunger for ten days and yet he recovered. One patient had pneumonia three times, complicated by left suppurative otitis media, and recovered. A patient with advanced pulmonary tuberculosis developed pneumonia after a few days of influenza. He had several smart hemorrhages. In spite of his T. B. condition and the hemorrhages, he recovered.

On the other hand, the patients who left their beds too soon fared very badly. One patient, a well-developed muscular man, made a quick recovery from a mild type of influenza, left his bed, against advice, to close the windows during a rain storm, developed pneumonia, got worse every day, and died in a few days.

A woman, eight months pregnant, with double mitral disease, developed pneumonia early in the disease, recovered on a Friday, left her bed on Saturday to go to the bathroom, had a relapse, gave birth to her baby two days later, and died about 24 hours afterwards.

I was called upon to see three moribund cases with pneumonia. One died within a few hours after my visit; one in 36 hours, one in about 48 hours. A similar number of my serious patients drifted to other doctors and died under their care. My mortality was, therefore, either nothing or less than two per cent.

Convalescents. This was marked by loss of flesh and weight, pallor, sweating, and prolonged weakness. Often there was persisting cough or hoarseness. Various neuralgic pains are common. The heart and kidneys were not seriously affected. Convalescence was slow. The blood pressure continues low for a long time.

Medication. Phenacetin instead of aspirin should be used in adults, in uncomplicated cases. A stimulating expectorant should be used through the entire disease. Stimulants should be used in radical doses, if necessary. Irritation of the nose and throat should be avoided. Inhalation of camphor or other irritating vapors should be condemned. Camphor, argyrol, etc., should be used only if there is an actual rhinitis present.

Vaccine seemed to aggravate the disease in a few of my cases. A few persons receiving vaccine as a prophylaxis did not develop influenza.

Conclusion. True epidemic influenza is manifested either by a bright red rash on face, or simply a violet blushing of *alae nasi.* This same phenomenon is observed on the uvula; and, at times, on the entire body.

There are always symptoms of laryngitis or tracheitis. A patient without a rash on face with pallor of nose and of uvula is probably ill with ordinary "grip."

The disease is characterized by marked and prolonged exhaustion out of proportion to the fever, pulse or duration of the illness.

In treatment, rest must be absolute, physically or mentally. Sitting up simply to have bed fixed, or one walk to the bathroom has caused a relapse with pneumonia.

Phenacetin in the great majority of patients aborts the fever and the general malaise in a few days. Where the pulse is weak or rapid caffeine citrate is given with it in the same dosage, usually three grains every two hours. Syrup ammonium hypophosphite in teaspoonful doses every three or four hours is regarded as the best expectorant and invaluable stimulant of respiration. I used it during the entire course of bronchitis or pneumonia.

For cardiac depression, tablet digifolin gr. 1½ every eight to four hours was found to be dependable in nearly each patient. I combined it with caffeine citrate, grains two to five, every two hours. As the blood pressure is usually already low no nitrites were used. Venesection in one case gave temporary improvement. Perhaps it should be tried more often.

As a prophylactic, I make so bold as to suggest syrup of hydriodic acid, a teaspoonful two or three times a day, hoping that the iodism it causes in the respiratory tract may be of a protective nature.

Society Report.

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA, SIXTY-EIGHTH ANNUAL SESSION, HELD AT PHILADELPHIA, SEPTEMBER 23, 24, 25 AND 26, 1918.

THE session was called to order in general meeting at 10 A.M. Tuesday, September 23rd in the ballroom of the Bellevue-Stratford Hotel, by the president, Dr. Walter F. Donaldson, Pittburgh.

THE PRESIDENT'S ADDRESS.—MEDICAL ACTIVITIES IN PENNSYLVANIA.

DR. FREDERICK L. VANSICKLE: For the first time in the history of the Medical Society of the State of Pennsylvania has it been bereaved by the loss of a president during his active term of office. Our late lamented worthy president, Dr. Samuel G. Dixon, whose demise was so untimely in the work of this Society, has left an imprint upon medical and civic affairs of this Commonwealth far greater than is possible to the average man. I would express the hope that the work established by Dr. Dixon may not be altered, perverted, or disorganized. With so few of the qualifications which he possessed, with so few of the honors which he received, I would voice my grateful appreciation upon being elected a successor to so great a man. Many duties confront us today: In the present situation the first duty of the medical profession is to organize in two classes requested by the Government, the Medical Reserve Corps and the Volunteer Medical Service Corps. It would be highly desirable to create in this society a commission to carry on a co-relation of work with the War Department. Social insurance requires the aid of every thoughtful worker in this field. Suggestions regarding amendments or alterations for the benefit of the profession should be submitted to the committee in charge. Fee bills as they relate to the treatment of injuries should be unified or a composite bill drawn. Closely allied is the question of annual or semi-annual examination of industrial workers in order to keep the worker fit. A greater business acumen should obtain in the medical profession. We, unfortunately, deserve the criticism that we keep books badly. The work of the Bureau of Medical Education and Licensure has shown it to be a most useful branch of the State's service. The work of the American Medical Association, through the Council on Medical Education, has rendered a great service to organized medicine, and I would here refer to President Bevan's address relating to the supply of medical men. It would seem eminently wise were the colleges of this State to adopt the plan therein recommended. A better scheme to safeguard the interests of the profession in its relation to legislative measures should be adopted. Upon the problem of the use of alcohol as a beverage we can have no neutral ground. The time has long since passed when we should demand of the Federal and State governments the enactment of laws eliminating the manufacture and sale of alcoholic beverages; not merely as a war measure, but for all the other known reasons. Pennsylvania must get into line.

INTERPRETATION OF THE MANIFESTATIONS OF SHOCK.

Dr. C. C. Guthrie, Pittsburgh: In studying shock in the laboratory the first endeavor has been to discover the causative mechanism with the view of establishing scientific interpretations of the phenomena and with the ultimate purpose of developing rational methods of prevention and treatment. Studies have been limited to experiment with laboratory animals, mainly dogs. Investigation is therefore handicapped by the uncertainty of the conditions induced being identical with those in man, and by the difficulty in diagnosis. Our studies in the search for causative mechanism have been for the most part negative. The evidence points rather to the central nervous system as the probable seat of primary change, particularly to the bulbar mechanism presiding over circulation and respiration. Results obtained in pronounced shock showed that both reflex vasomotor and respiratory response may be profoundly decreased. Decrease in reflex augmentation of arterial blood pressure occurred, both actual and in percentage of blood pressure. That the result in some instances was not due to stimulation fatigue was demonstrated. That it was not due to fatigue of a single path due to repeated stimulation, or to possible localized central fatigue was also shown. Before drawing conclusions from such observations it is necessary to know whether or not reflex vasomotor augmentation is a true index of the state of activity and capacity of the vasomotor mechanism. We are inclined to believe that shock of sudden onset in normal individuals preponderatingly is of inhibitory character, which is in agreement with a view expressed by Meltzer. It is recommended that the term shock be reserved for the condition exemplified by the acute clinical state; and that the term collapse be employed to designate the moribund state following shock or any other condition. Experimental evidence is presented supporting the probability that the primary derangement in shock is of nervous character. In collapse, indirect and general considerations strongly indicate profound nervous derangement. The conditions in shock and collapse differ fundamentally and treatment indications differ accordingly. In shock associated with severe hemorrhage, restoration of blood volume is indicated. For this purpose transfusion seems best, but beneficial action may be obtained by intravenous injections of artificial solutions. The addition of a colloidal substance to such solutions causes their longer retention. For this purpose dilute acacia seems preferable to other substances hitherto employed. Preventive measures and prompt treatment are strongly indicated. Preventive measures are worthy of the most serious consideration, but they have been omitted from this discussion as we lack adequate first-hand observations. Discussion of theories is omitted for the reason that at the present time they are legion and no one has overwhelming support.

(To be continued.)

American Medical Biographies.

COOPER, THOMAS (1759-1839).*

Thomas Cooper, for twelve years president of the University of South Carolina, naturalist, politician and writer, was an Englishman who believed in individual thinking and free speech, a stormy petrel who found it best to flit to the land of the free and settle in Pennsylvania in 1795. He was born in London, October 22, 1759; was educated at Oxford, and subsequently studied law and medicine, receiving the M.D. degree. He was admitted to the Bar and travelled a circuit for a few years. Being sent to France by the democratic clubs of England to similar clubs there, he sided with the Girondists and was called to account for this by Mr. Burke in the House of Commons, Cooper replying with a violent pamphlet. While in France he learned to make chlorine from common salt, and on his return became an unsuccessful calico-printer at Manchester. He established himself as a lawyer in Pennsylvania in 1795, allied himself with the Democrats and attacked President Adams in a newspaper article in 1799; was tried for libel and sentenced to six months' imprisonment and a fine of four hundred dollars. A little later he was made a judge in Lucerne County, but was removed for arbitrary conduct in 1811. As a personal friend of Thomas Jefferson he supported his administration and the administrations of Madison and Monroe. He became professor of chemistry in Dickinson College and then was elected professor in the newly established University of Virginia, but was soon forced to resign, because of his religious views. This was previous to December 3, 1819, when he was selected to succeed Professor E. D. Smith in the chair of chemistry in the South Carolina College at Columbia, then fifteen years old and having a faculty of five and a student body of one hundred. In two years, on the death of President Macy, Dr. Cooper took his place and continued in office until 1833. He was almost idolized for his genius and learning; he lectured on chemistry and on political economy; felt qualified to teach metaphysics but thought it "not worth the time required to be bestowed upon it." Almost from the beginning he had difficulty with discipline. The students misbehaved and rebelled against established order, an attitude with which Cooper might have been sympathetic, because of his own past, but was not. The college was in a turmoil during his incumbency. J. Marion Sims graduated here in 1832, and says of Cooper: "He was considerably over seventy, a remarkable looking man, never called Dr. Cooper but "Old Coot," a name applied to a terrapin, and the name suited him exactly." He was less than five feet tall and had an enormous head. To him it attributed the suggestion of establishing a medical college in South Carolina, a project that Samuel Henry Dickson finally saw to fruition. Cooper was an ardent free trader and an advocate of state rights, publishing anonymously a clever allegorical sketch entitled "Memoirs of a Nullifier," in 1832. In the previous year he had attacked Professor Silliman's views on geology in a lecture to his class, Silliman of Yale and he being at that time the only two lecturers on this subject in the country. Silliman's syllabus of lectures was "founded on the Mosaic account of the foundation of the earth and of the Deluge, as being delivered under the authority of divine inspiration." Furthermore, Cooper published a pamphlet on the connection between geology and the Pentateuch, that gave great offense. Finally his connection with the college was severed by reorganizing the faculty, dropping his name, but at the same time conferring on him the degree of LL.D.

The rest of his life was spent in Columbia, South Carolina, in the revision of the statutes of the State, five volumes having been published at the time of his death, May 11, 1839.

Dr. Cooper possessed great versatility and wide knowledge, displayed as a lecturer and writer. He was an admirable talker. Some of his best known writings are: "Tracts on Medical Jurisprudence," 1819; "Lectures on the Elements of Political Economy," Charleston, 1826; "Observations on the Writings of Thomas Priestley," 1826; "Foundation of Civil Government" and "On the Constitution of the United States." **Walter L. Burrage, M.D.**

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* From the forthcoming "American Medical Biography" by Dr. Howard A. Kelly and Dr. Walter L. Burrage. Any important additions or corrections will be welcomed by the authors.

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RECENT STUDIES OF GAS GANGRENE.

THE study of gas gangrene, as it has appeared in different stages of the war, and under different conditions, has produced some conflicting results. In their exhaustive treatise, *La Gangrène Gazeuse* (1918), Weinberg and Seguin call attention to the miscellaneous class of organisms usually associated with gas gangrene, and one of the primary purposes of their researches is to clear away the confusion which at presents exists in this branch of bacteriological observation. The results show clearly that the etiology of gas gangrene is extremely complex, the complexity arising both from the variety of associated bacteria and the difficulty of tracing the relation between single species and the disease. Though it would appear that B. perfringens is so commonly found as to be a characteristic, the probability is, if we examine the whole evidence, that this organism is not the real cause. Another result of these studies is the finding of specific differences between bacteria usually regarded as the same. The bacillus of malignant oedema, for example, and the Vibrion septique of Pasteur which some authors consider as identical have proved on sufficiently exact investigation to be different organisms. It is true that opinions differ as to this distinction. Thus, Calo in the *Policlinico* of June 15, 1918, believes that the bacillus of malignant oedema and the Vibrion septique are the same. But, according to Weinberg and Seguin, the identification is faulty, being based on insufficient evidence, and this opinion is borne out by recent German investigations. The infectious agents of gas gangrene are still imperfectly understood, but it seems likely that six species of anaerobes and two species of aerobes must be looked for as the causes of the gas and putrefaction of wounds.

This seems to be the most precise way of stating the matter, for gas gangrene is remarkable as an example of a transitional form of disease for which few analogies can be found. Thus E. Fraenkel observes (*Deutsche. med. Wochenschrift*, 1918, p. 759) that in true "Gasbrand" there is a fulminating destruction of the muscles with the production of gas and little or no oedema, while in malignant oedema there is only a very small production of gas with considerable oedema. The bacteriology of the two forms of disease is also different. In malignant oedema Fraenkel found B. welchii, which was obtained in pure culture by using Zeissler's human blood-glucose-agar plates and incubating under anaerobic conditions. The precise part played by this organism in gas gangrene is not clear, though it appears to be fully established that in gas gangrene and in malignant oedema there is always more than one infective agent.

Frenc hauthors, like Sacquépèe and Weinberg and Seguin, state that the anaerobes are the cause of the gangrene, which, so far, is not clearly understood, while the toxins in the circulation produce the constitutional symptoms. Sacquépèe (*Presse médicale*, April, 1918) found B. perfringens in 82 cases, Vibrion septique typique in 28, Vibrion septique atypique in 11, and his B. bellonensis in 35; and he adds that in nearly all cases typical and atypical Vibrion septique, and B. bellonensis are found in symbiosis. Weinberg and Seguin give a more complete classification, the result of cultures and clinical experiences with anti-perfringens and polyvalent sera and anti-toxins. In true gas gangrene there are always several species of bacteria present, of which the chief are B. perfringens, B. oedematiens, Vibrion septique, B. fallax, B. aerofoetidus, B. sporogenes, and the aerobes B. coli and B. proteus.

R. Pfeiffer and G. Bessau (*Deutsche. med. Wochenschrift*, 1917, pp. 1217, 1255, 1281) have endeavored to identify these organisms. In an article on the Bacteriology of Gas Gangrene, they regard the disease as due to the combined action of a variety of anaerobic bacteria, and never as the result of a single variety. In 150 cases from the Somme battlefield Fraenkel's bacillus (B. aerogenes encapsulatus) was the most common, but was never present alone. They emphasize the difficulty of obtaining pure cultures of any of the anaerobes, and this, it is well known, has been the universal experience. It is to be noted that B. perfringens is identified with B. aerogenes encapsulatus of Welch and Nuttall, while the Vibrion septique has been identified by Weinberg and Seguin as the bacillus of Ghon and Sachs and von Hibler.

Into this confusion of nomenclature Pfeiffer and Bessau have certainly introduced some needed clarity. They have narrowed the field of investigation considerably by describing four organisms in detail. Two are classified as "putrefiers," and two as "non-putrefiers." The non-putrefiers are: (1) The bacillus of Fraenkel, identified with B. welchii, B. perfringens; and (2) the bacillus malignant oedema of Koch. The first is the most common.

Of the putrefiers the most important is the so-called "Uhrzeiger" or "clock-hand" bacillus. It is very common, is mobile, Gram-positive, spores abundantly, producing gas and a foetid odor. The characters are those of the B. sporogenes of British writers. The fourth organism is Par-oedem bacillus of German authors, which produces much putrefaction; it is non-mobile, and forms spores. In addition Pfeiffer and Bessau found a variety of unidentified species. Their conclusion agrees with that of other writers that gas gangrene and malignant oedema are never caused by one type of bacillus. Thus, in the cases of malignant oedema described by Weinberg and Seguin, cultures were often contaminated with B. sporogenes, so that the distinction between gas gangrene and malignant oedema seems, in the last analysis, to be a form of transition.

The cause of the toxic or constitutional symptoms is generally regarded as B. perfringens, sometimes as B. oedematiens. On this principle Weinberg and Seguin prepared their anti-perfringens serum. Judging from the cases in their book it appears to be distinctly beneficial. These facts furnish a tolerably fair test of the number and variety of the bacteria which a given case of gas gangrene represents. After reading the most recent European literature, including the German, we find it impossible to resist the impression that these researches have considerably simplified the task of finding the true agents of the disease. The most important certainly seem to be B. perfringens and B. sporogenes, although the flora of gas gangrene varies with soil and climate. Hence it manifests different characters in Italy, Germany, and on the Eastern fronts. The difficulties of the subject are greatly increased by the unnecessarily voluminous and misleading nomenclature which encumbers this branch of bacteriology. The habit of giving several names to the same organism is a fruitful source of error and confusion, while it makes bacteriological examinations much more complicated than is desirable for the practical routine of field work.

COMPARATIVE PREVALENCE OF SYPHILIS AND GONORRHEA.*

We present herewith the total figures on the reporting of gonorrhea and syphilis to December 1, 1918, with an analysis month by month:

	Gonorrhea	Syphilis	Total
February	47	16	63
March	982	376	1358
April	835	415	1250
May	787	334	1121
June	815	330	1145
July	750	285	1035
August	828	360	1188
September	669	298	967
October	552	233	785
November	771	365	1136
	7036	3012	10048

To interpret these figures certain facts may well be borue in mind. While the regulations requiring the reporting of venereal diseases went into effect February 1, the blank forms for such reporting were not in the hands of all physicians before the latter part of March. This fact undoubtedly accounts for the sudden rise

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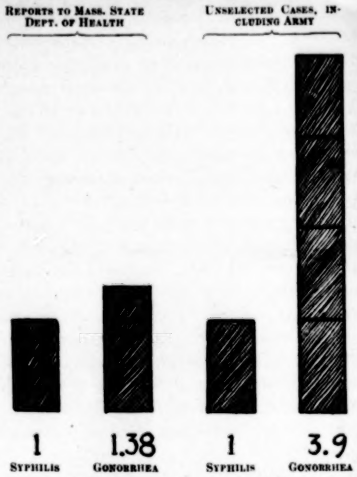
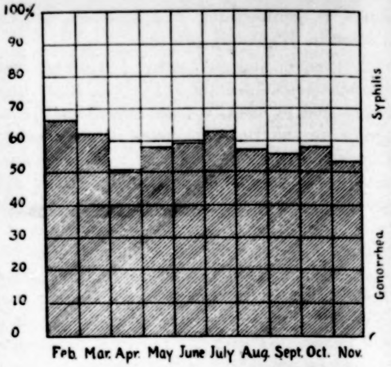
* Arsphenamine can now be supplied by the State Laboratories in amounts sufficient to control infectious cases of syphilis. Distribution is made through the nearest State-approved clinic, with the approval of the chief of clinic.

RATIO OF SYPHILIS TO GONORRHEA.



MASSACHUSETTS—PER CENT. OF SYPHILIS AND GONORRHEA AS SHOWN BY CASES REPORTED FROM FEB. 1, 1918, TO DEC. 1, 1918.



Average Ratio—Syphilis : Gonorrhea :: 1 : 1.38.

in the number of cases reported during the early months, together with the fact that cases which had been under treatment with a certain physician for an unknown period were first reported at the time of his receiving blank forms. Again, the September and October figures were undoubtedly affected by the influenza epidemic, which was at its height in Massachusetts during these months.

Analysis of these figures with regard to the ratio between syphilis and gonorrhea leads to some interesting deductions, as may be seen by the accompanying chart.

Conclusions based upon the reports of cases of syphilis and gonorrhea would indicate that syphilis exists in a community in a ratio to gonorrhea of 1:1.38, whereas estimates based upon the reports of the examining boards of the draft army, constituting a cross-section of the young male population, would indicate that syphilis exists in a ratio to gonorrhea of about 1:4. The Army reports are unique in that they give the first evidence available in history of the prevalence of these two diseases, considered either jointly or separately. A report of a number of women patrol officers, working on the streets and in public parks, who have been securing examination of cases which might be assumed to have contracted one or the other disease, shows a ratio of syphilis to gonorrhea of 1:3.1. A similar ratio is borne out in the experience of the Subdivision of Venereal Diseases of the State Department of Health in cases referred as possible sources of infection from the Army and Navy. The proportion in these cases has been 1:4.6.

The reasons for the discrepancy between the ratio found in the Massachusetts reports of the two diseases and that shown under the other circumstances cited, wherein the cases were unselected, are numerous and some of them are worthy of consideration. We note a few:

1. The greater importance attached to syphilis as a disease by the average physician leads him to report his case more uniformly.

2. The greater promise of results in the treatment of syphilis as against gonorrhea, with the attendant interest in a comparatively new therapeutic field, such as is offered by arsphenamin treatment, leads to greater interest on the part of the profession.

3. The fact that gonorrhea is more often self-treated or treated over the drug counter.

4. The patient's greater fear of the effects of syphilis leads him to apply for treatment in a relatively larger number of cases. In addition to the inherent dread of syphilis, the educational drive has been carried on with far more vigor with regard to syphilis than has been done in the case of gonorrhea. The impression that gonorrhea is "no worse than a cold" is far from eliminated from the public mind in spite of the recent advance in popular education on these subjects.

The fact that the large clinics and institutions are reporting cases of syphilis only during their period of greatest infectivity would also militate against the correctness of conclusions drawn from figures as they stand today. Any inaccuracy due to this cause, however, would obviously tend to decrease rather than increase the apparent disparity between conditions as they may be surmised to exist and as reflected by reporting figures.

This discussion is presented with a view to stimulating further investigation of existing conditions and not in any sense as evidence of the incidence of these diseases.

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THE CONTROL OF VENEREAL DISEASES.

The importance of venereal diseases as a cause of suffering and inefficiency is not fully recognized by the medical profession. Until the selective service law went into effect we really had no statistics regarding these diseases. As a result of the examinations made under that law we now know that about 2.4% of the white, and 6.6% of the colored men examined were found to be infected with gonorrhea.

Among the men coming from New England, the following percentage were found to be suffering from venereal diseases: Rhode Island, 2.6%; Maine, 1.8%; Massachusetts, 1.7%; Connecticut, 1.6%; Vermont, 1.5%, and New Hampshire, 0.3%. Although the conditions in New England appear to be better than in many of the other states, these figures indicate that we have a serious venereal problem which must be dealt with fearlessly and efficiently. In considering these statistics it must be remembered that these men actually had the disease at the time of arrival at camp. Data as to the number of men who had previously been infected are not now attainable.

To deal successfully with a disease we must know its extent and the distribution as well as the mode of transmission. Fortunately, in the diseases under discussion we know the exact mode of transmission, but we do not know how widely they are distributed. However, the members of the medical profession have exact data upon this subject and the patriotic physician can do no better service for the country than by fully coöperating with the health authorities in reporting these cases.

Venereal diseases are spread by chronic carriers and once we know the carriers we should by proper methods of treatment be able quickly to rid the community of a large number of foci of infection.

The results obtained by the intensive treatment given these cases in the Development Battalion of the Army have shown that we can hope by proper treatment to clear up most of the cases. The second step in the campaign is therefore the establishment of a sufficient number of properly equipped dispensaries where such cases can be properly treated.

The third step in the campaign is education. This must be given to the parents and teachers of the coming generation. We can not hope for very much from the men and women who have already contracted bad habits of sexual indulgence. There is, however, great hope for the coming generation if instruction in self-hygiene be given in a proper way and at the proper time. Our great aim now should be to give to the parents the knowledge that will enable them properly to instruct their children. We want the children to know the beauties of creation, deprived of their glamour and false modesty. Above all, each child should be taught self-restraint and self-reliance.

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THE EPIDEMIC OF INFLUENZA IN BOSTON.

In the September issue of the *Monthly Bulletin* of the Health Department of the City of Boston, Health Commissioner William C. Woodward reviews the epidemic of influenza which occurred in the summer. The report includes, also, an interesting survey of previous outbreaks of influenza in this and in foreign countries. The first definite historical record of influenza is that of the pandemic of the disease, which prevailed in Europe in 1510. From the many detailed descriptions of its clinical aspects, it is evident that the type of influenza in that pandemic was strikingly like that now seen in this country; the mortality was comparatively high: pneumonia was frequent, presenting the same features as the pneumonias in the present epidemic; and a tendency towards bleeding from the nose and lungs is recorded, an accompaniment of the disease which has not been particularly noted in more recent epidemics prior to the present one. From the time just named, well recognized epidemics of influenza have spread over the world at irregular intervals. In the eighteenth century, a severe epidemic prevailed in Europe in 1743, which reached America in 1761. In 1761 and 1762, epidemics occurred in portions of Europe which had previously escaped. Twenty years later, in 1781 and 1782, the disease again appeared in Asia and in Europe, and during 1788 and 1789 epidemics occurred in Europe and again extended to America. Pandemics extending to America occurred in 1802-03, in 1830-33, in 1836-37, in 1847-48, and in 1889-90, with more or less epidemic prevalence of the disease in 1850-51, in 1855-58, in 1874-75, and for several years following the outbreak in 1889.

Speaking of the epidemic of 1918 in Boston, Dr. Woodward states that as early as the autumn of 1917, indefinite reports of the prevalence of influenza in epidemic form in certain parts of Europe began to filter through the military censors, and by the beginning of the summer just past it had become evident that the disease in epidemic form was prevailing or had occurred in Spain, France, Switzerland, Germany, Great Britain and Ireland, and to a considerable extent in both armies on the Western front. Judging from reports which have reached us from military hospitals in Europe, the prevailing type of the disease was not particularly severe, and the tendency to pneumonia and death was not especially marked, except, according to one report, where the sick were crowded together.

About the first of July of the current year, convalescent cases of influenza began to be seen more or less frequently among members of the crews of transports and other vessels arriving in Boston from European ports. There is no evidence, however, to show exactly when the epidemic began in Boston. The disease was not made reportable by the State Department of Health until October 4, 1918, long after the presence of the disease had been well recognized. Case reports are not available, therefore, to show when influenza first appeared.

Public attention was first directed to influenza in this vicinity by the apparently sudden appearance during the week ending August 28 of about fifty cases at the naval station at the Commonwealth Pier, and during the next two weeks over 2,000 cases occurred in the naval forces in the First Naval District. Of the patients removed to hospitals, over 5 per cent. developed broncho-pneumonia, with a mortality of over 60 per cent. in such cases. To what extent, if any, cases of influenza had been occurring at the Commonwealth Pier or at other stations in the First Naval District prior to the appearance of the cases the week of August 28, no information is at present available. A sudden and very significant increase reported the third week in August in the number of cases of pneumonia occurring in the army cantonment at Camp Devens in this district seems, however, to justify a suspicion that an influenza epidemic may have started among the soldiers there even before it appeared in the naval forces.

The outbreak of influenza in the naval force at Commonwealth Pier was followed in less than a week by similar sudden outbreaks both in the aviation schools and among the naval radio men at the Institute of Technology, in Cambridge. Curiously, the early cases seemed to be more prevalent among the men living outside than among those quartered in the barracks at the Institute. The incidence of the disease here was apparently somewhat higher than at the Commonwealth Pier.

A record of the number of cases and deaths from September 7 to November 9 shows a total of 997 cases of lobar pneumonia, 3,399 of influenza; 942 deaths due to pneumonia in all forms, and 3,430 from influenza, giving a total of 4,372 deaths.

This bulletin includes, also, a discussion of the cause of influenza, advice as to care of patients and the prevention of influenza and pneumonia, and a record of the regulations and orders issued for the prevention of the spread of influenza.

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SCIENCE AND MEDICAL TEACHING.

AT a meeting held at Harvard Medical School on December 16, 1918, Professor Graham Lusk delivered an address showing the value of scientific observation and experiment and its relation to medicine. The prophets of the past have pointed the way to present growth and future achievement. The French master, Lavoisier, conceived the scientific method as a law which demands procedure only from what is known to what is unknown, resulting in a conclusion which is an immediate consequence necessarily flowing from observation and experiment. This mental attitude is characteristic of the present day, particularly in its relation to medicine.

The universities of Cambridge and Oxford, founded at a time when authority was worshipped, studied at first hand the unknown culture of a bygone civilization, after the revival of learning in Italy in the 15th and 16th centuries. Galileo and Harvey were persecuted because they preferred to trust their own observations rather than accept the teachings of authorities. The founding of the Royal Society of London in 1660, however, afforded protection and support to investigators, whose minds, liberated by the age of historical research, were then free to start upon a course of experimental observation.

The first half of the 19th century was a brilliant era in French science, producing Lavoisier, Magendie, the founder of experimental physiology, and Claude Bernard, his most distinguished pupil. Not until 1850 did Germany fully disassociate science from speculative philosophy and enter the field of scientific progress. The marvelous growth of German science since that time has been the admiration of the world. It may be said to have passed through two stages: a first stage, that of the study of science for the love of finding out the truth; and a second stage, the study of science, because—in the words of a German professor—"pride in a scientific reputation as an incentive to ambition is not to be underestimated." Germany's progress in the past has been considerable, and we must continue to recognize her scientific achievement.

In America, medical education in this country was advancing rapidly before the war. Men have been inspired by the love of searching for understanding regarding the complex processes of life in health and disease. Though the capacity for discovering new things may not be given to all, yet all should have the training which comes from an environment such as that existing in the Harvard Medical School, where the students are educated by men whose lives have been illumined by creative thought.

The war brought a temporary halt to promising activities in this country; yet, in many lines, the war has also developed much that is of great value to the nation and medical science. Now is the time to take up the work where it was left at the outbreak of the war. The laboratories of the country's medical schools offer present opportunity for the future advancement of knowledge. The men of England and the men of France have fought for four long years; ours for four months. The young physicians of America of the present generation have the obligation and may, perhaps, deserve the credit of establishing in the days to come the dreams for medicine of Magendie, and of Claude Bernard, thus insuring a notable scientific era in this great land of ours. Only thus can medicine progress; only through observation and experiment can the world grow in wealth of knowledge.

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FOUR HUNDREDTH ANNIVERSARY OF THE FOUNDATION OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

The *British Medical Journal* in one of its recent numbers has called our attention to the four hundredth anniversary of the foundation of the Royal College of Physicans of London. Henry VIII., who granted the charter for this college on September 23, 1518, was prompted by the example of similar institutions in Italy and elsewhere. On the advice of Wolsey and of Thomas Linacre and others of his physicians, a college consisting of eight persons was instituted which had for its object to improve and regulate the exercises of the art of physic. These eight men had power to select a president annually from among themselves and as vacancies occurred in their numbers they were to choose "the most cunning and expert men" as successors. At this time it was not permitted that any person except a graduate of Oxford or Cambridge should practice physics throughout England unless such person be first examined and approved by the president and three of the "elects" of this institution. For nearly one hundred years thereafter the meetings of the College were held at Linacre's own home, a small house in Knightrider street, the front portions of which were used as a council room and library. In 1851, however, these premises were enlarged and in 1853 lectures were delivered by Dr. Caldwell and Lord Lumley in a large added theatre. Shortly after, a botanical garden under the direction of Gerard was secured and from then on the steady growth of the College gradually required larger surroundings. The last meeting in the old building was held on June 25,

1614. Linacre, the founder, was president until his death in 1524. He was learned as a physician and as a scholar and his successors during the first hundred years include among their number many names now famous: Clement, professor of Greek at Oxford; Wotton, the zoologist; Caius, linguist, critic, physician, naturalist, second founder of Gonville, and Caius College, Cambridge, antiquarian and designer of the insignia of office still used by presidents; and William Gilbert, author of "De Magnete" and first physicist of the college. August 23, 1614, was the date of the first meeting in the new college and in April, 1616, Harvey delivered the Lumleian lectures and two years later the first pharmacopaeia Londinensis was issued by the college. Then came a period of great distress caused by the Civil War. It was feared that the College must be sold at auction; but Dr. Baldwin Hamley averted this by purchasing the house and garden himself and returning them two years later to his colleagues. In 1653-4, through the generosity of Harvey, a museum of valuable contents and a library of medical books, treatises on geometry, geography, astronomy, music, optics, natural history and travels was added to the college. In 1657, after the death of Harvey, another period of depression occurred and in 1665, during the great plague, most of the Fellows and officers fled the city, thieves emptied the treasury and on September 5, 1666, the London fire consumed the whole of the college buildings and the few valuables which were saved were not placed again in a home until the building in Warwick Lane, designed by Sir Christopher Wren, was opened in 1674. Here for one hundred and fifty years this stately building, consisting of an anatomical theatre, library, coenaculum, censor's room and botanical garden was occupied by the Royal College of Physicians. But even these buildings were not destined to be permanent and, in 1825, through the influence of Sir Henry Halford, a grant of land was obtained and the present building designed by Sir Robert Smirke, was erected and opened on June 25th. The Warwick Lane premises were sold for £9,000, but the names of such men as Mayerne, Glisson and Sydenham, exponents of clinical medicine, followed by Radcliffe, Garth, Arbuthnot, Freind, Sloane, Meade and William Heberden have not disappeared with the old buildings, and they are constantly recalled to our minds as men who became famous in the history of medicine.

MEDICAL NOTES.

BRITISH MEDICAL SERVICE IN ITALY.—A dispatch of General the Earl of Cavan, K.P., K.C.B., Commanding-in-Chief British Forces in Italy, dated November 15th, 1918, contains the following reference to the medical service:

"The fresh influenza epidemic, which broke out shortly before the commencement of the operations, threw a heavy and additional strain on the medical service. Despite this the evacuation and care of both the sick and wounded was rapidly and satisfactorily carried out. All the arrangements were most ably organized by my Director of Medical Service, Major-General F. R. Newland, C.B., C.M.G."

The following note is made of the good work done by the British Red Cross Society.

"In their retreat the Austrians left many hospitals full of sick and wounded of all nationalities behind them. In many cases these hospitals were bereft of provisions and attendants. The British Red Cross, under the supervision of Colonel Sir Courtauld Thompson, K.B.E., C.B., spared no efforts to alleviate the sufferings of the inmates, and undoubtedly saved the lives of many Austrian as well as Italian patients."

INFLUENZA IN FORTY-SIX LARGEST CITIES.—The recent influenza epidemic caused 111,688 deaths in the forty-six largest cities and increased the combined death rate for those communities in 1918 to 19.6 per thousand.

Baltimore, with 26.8 per thousand, had the highest rate of the registration cities, while St. Paul, with 13.9, had the lowest.

There were 442,374 deaths in the forty-six cities, the estimated population of forty-two of which aggregated 20,514,520. There was no estimate of population for the other four. Deaths from influenza totalled 60,439, with 42,149 deaths from pneumonia.

The year's total death rate in New York city was 18.8 per thousand, compared with 15.2 for 1917. In Chicago it was 17.1, against 14.9 the year before and in Philadelphia 24.2, compared with 17.1 in 1917. In Cleveland it was 16.0 for the last year and 13.9 in 1917; Boston 22.0 and 16.4; St. Louis, 17.6 and 15.1.

WAR RELIEF FUNDS.—On January 8, the totals of the principal New England War Relief funds reached the following amounts:

Belgian Fund	$726,511.47
French Wounded Fund	465,941.39
French Orphanage Fund	423,304.49
Italian Fund	265,253.55
Lafayette Fund	45,543.41

Activities of Insects During the War.—It has been reported that of the insects responsible for the death of many in the war zone, the louse has been the most deadly, and has caused the death of at least a million persons. In Serbia alone typhus, a louse-borne disease, infected nearly 1,000,000 persons and killed 500 a day in the little city of Jassy, while 200 of the 1200 medical officers in the country, died from the disease. This disease spread over Russia, Austria, Germany and the Balkans generally.

Lieutenant Lloyd, chief entomologist in northern Rhodesia, is reported to have made the following statements:

"Typhus, one of the most dreadful epidemic diseases of man, is due entirely to the activities of lice. The same remark applies to relapsing fever over the greater portion of the world. Still a third disease, trench fever, has been placed to the credit of the louse, and possibly even now the full extent of its guilt is not known."

In speaking of conditions during the typhus outbreak at the Wittenberg camp in Germany, he said·

"The Germans know as we do, that typhus is spread by lice, and that the epidemic could have been cut short and stamped out a week after its commencement by the disinfection of all prisoners. One of the few good points about insect-borne diseases is that they are entirely preventable, if preventive measures are taken in time and carried out in a thorough manner."

Birthrate of Germany and Austria Decreased by War.—The birthrates of Germany and of Austria have been seriously decreased by the war. Through loss of man power, and a shortage of births to the number of about 3,000,000, Germany's population has been reduced from her normal population of about 72,000,000 to approximately 64,000,000. In Austria, the population has been reduced by nearly 8 per cent. decrease from the population in 1914. In Hungary, the situation is even worse, with almost a 13 per cent. decrease.

Meanwhile, despite the losses which England has suffered in the war zone, the British population has been growing. By the middle of 1919 this population will be only 3 per cent. lower than it would have been without war. Great Britain in 1919 will have a larger population than in 1914.

The rate of increase in the United States has not been affected at all.

British Praise for American Physicians.—Army medical officers now in France, whether with the expeditionary forces or serving with the British, are rendering distinguished service. A letter from a British Medical Officer, Lieutenant General Goodwin, says that "the work of these U.S.A. medical officers deserves special recognition. They have been invaluable and have worked under the most trying conditions with great gallantry."

Pneumonia in Camps to be Studied.—The War Department has organized a board, consisting of Colonels Beane C. Howard, Frederick F. Russel, Victor C. Vaughan, Lieutenant-Colonel William C. Welch, of the Medical Corps, and Surgeon Rufus Cole, U.S.A., for the purpose of investigating the nature, causes, prevention, and treatment of pneumonia in the military camps. It is probable that during next summer and fall the Army Medical Department will have to take care of as many men as it did last year, and it is hoped that the work of the board will produce good results.

No large army before has had so low a death rate from disease as that of the present armies of the United States. Deaths from typhoid fever have been negligible.

The most prevalent disease has been measles, not usually a fatal malady, but the precursor of pneumonia and meningitis, which have caused nearly two-thirds of all the deaths in camps and cantonments. All other diseases were relatively so small in number that the secretary of war was led to say that, excepting measles and the diseases following it, the health of the camps was excellent.

Preventing the Introduction of Communicable Diseases by Returning Soldiers.—In a recent issue of the United States Public Health Service Report, the plans for preventing the introduction of communicable diseases by returning soldiers are outlined. Now that the soldiers are about to return from overseas, health officers throughout the country will have to exercise the greatest vigilance in order that exotic epidemic diseases may not be carried into this country and spread with disastrous results. Among the hundreds of thousands of returning soldiers a number may exist, probably will exist, who will be carriers of diseases ordinarily not prevalent in this country, or not prevalent in that part of the country to which the soldier returns. Among the diseases especially to be feared are cholera, typhus and plague.

The danger is by no means imaginary, hence explicit instructions have been issued to all quarantine officers, urging the most careful examination, including laboratory tests, of all units liable to be carriers of these diseases. In addition to this, officers of the Public Health Service trained in quarantine procedure either have been sent to various ports of Europe or will be sent as the occasion may arise. There they will supervise the enforcement of the United States quarantine regulations applicable at foreign ports against ships and passengers destined for ports of the United States.

The plans now being worked out include a careful medical examination of all the soldiers prior to embarkation, delousing of all the clothing and other infested materials, the holding of suspicious cases for a period of observation and examination, in short, all measures needed to insure that no cholera, plague, typhus, trench fever, or other exotic disease is introduced into this country.

In the opinion of competent observers there is little danger of the introduction of cholera from the soldiers now in France and Germany. On the Russian front, however, conditions are by no means so satisfactory, for the country is still in a chaotic condition and cholera has been known to be prevalent in various sections. It is from this quarter, also, that the possibility of the introduction of plague must be considered.

Somewhat similar precautions will be taken to prevent, or at least minimize, the spread of disease by soldiers discharged from training camps.

Altogether, the coming few years will be very busy for health authorities everywhere, and it is to be hoped that the public will realize the need of giving them the greatest possible support and coöperation.

BOSTON AND MASSACHUSETTS.

WEEK'S DEATH RATE IN BOSTON.—During the week ending January 4, 1919, the number of deaths reported was 488 against 298 last year, with a rate of 31.95 against 19.81 last year. There were 37 deaths under one year of age against 49 last year.

The number of cases of principal reportable diseases were: Diphtheria, 71; scarlet fever, 24; measles, 7; whooping cough, 18; typhoid fever, 1; tuberculosis, 44.

Included in the above were the following cases of non-residents: Diphtheria, 9; scarlet fever, 1; tuberculosis, 2.

Total deaths from these diseases were: Diphtheria, 5; scarlet fever 1; measles 1; tuberculosis, 16.

Included in the above were the following non-residents: Diphtheria, 2; tuberculosis, 1.

FREE HOSPITAL FOR WOMEN.—The Free Hospital for Women, Boston, offers treatment to women without means, and is supported by donations from benevolent individuals, and by contributions from churches and religious societies. The forty-third annual report, issued for 1917-1918, shows that 1,091 patients have been admitted. Two thousand, one hundred and forty-seven operations have been performed during the year. The Out-Patient Department has cared for 6,343 women. Sixteen nurses were graduated from the training school.

THE BROCKTON HOSPITAL.—The twenty-second report of the Brockton Hospital for 1917 describes the hospital service which has been rendered during the year. One hundred and forty-four patients have been admitted and have received a total of 3,325 weeks' and one day's treatment. The Out-Patient Department has cared for 605 persons, to whom 1,738 treatments have been given. There have been 139 deaths. The additions to the nurses' Rosa Cottage and the superintendent's home have been completed and have relieved congestion so that better hospital work has been possible. A new ward, for which $158,000 has been raised, is being completed. There have been no material changes in the x-ray department. During the past year 712 plates have been taken on 410 ward and out-patients.

The training school course has been extended to cover three years. There has been an average of twenty-two pupil nurses in training throughout the year.

Foremost among the year's achievements may be mentioned the splendid arousing of the people of Brockton and its vicinity to the relief of a civic need, and the broadening consciousness apparent among the members of the corporation and staff of their opportunities for service to the community.

MASSACHUSETTS GENERAL HOSPITAL TRAINING SCHOOL.—The graduating exercises of the Massachusetts General Hospital Training School for Nurses were held on the evening of January 14, 1919, at 8 o'clock, in the Moseley Memorial Building on Fruit street. An address was delivered by Hon. Henry van Dyke, Lieutenant-Commander, U.S.N.R.F. A reception was held from 9 to 11 o'clock.

SUPPLY OF NURSES NOT SUFFICIENT TO MEET DEMAND.—Owing to the recurrence of influenza. the demand for nurses has been unusually great, and for the last three weeks it has been impossible to secure enough nurses in answer to the calls which have been made for them. Inquiries at various registries for nurses in Boston and its vicinity show that many more nurses could be used if they were available. Some of the registration offices are sending out volunteer nurses who have been secured from the State House. The reports which have been received of their work show that these volunteers are rendering valuable service, although the registry offices do not stand sponsors for them and send them out with that understanding.

A plan has recently been voted by the Mayor's emergency health committee to establish a permanent salaried force of municipal nurses and aids. They are to be under assignment of the city health authorities and are to be paid by the city if the patients they are attending are unable to pay them. The influenza epidemics have shown the inadequacy of the system under which the city depends upon the district nursing association for nurses. The city's calls upon the association for nurses have repeatedly found no nurses available The new plan aims to have a corps of trained attendants always at the command of the city for assignment only to cases of the most urgent kind.

FURTHER PLANS OF THE HEALTH DEPARTMENT.—Measures for combating influenza are being constantly extended. Dr. Eugene R. Kelley, State Commissioner of Health, has recommended to Governor Coolidge that a special appropriation of $5,000 be made for further experimentation with the serum which a commission of experts appointed by the State Health Department views as a promising remedy. The appropriation would be expended for the instruction of physicians in the methods of treating influenza lobar pneumonia patients with this serum.

The Commission has reported that the mortality at the naval hospital in influenza lobar pneumonia cases was markedly lower following the introduction of the serum treatment and that the mortality in serum-treated cases at the Naval Hospital was much lower than among patients at Camp Devens who were not treated with the serum. The comparison was based upon groups of similar numbers and ages.

Commissioner Kelley suggests that the best way to test the serum is to train a corps of doctors in the methods of the serum treatment and send them to hospitals through the State where they can instruct local physicians.

MASSACHUSETTS HOMEOPATHIC SOCIETY.—The annual meeting of the Boston Chapter of the Massachusetts Homeopathic Society was held in Boston recently. The principal address was by Dr. Thomas J. O'Brien, who discussed the influence of influenza upon the heart.

The following officers were elected for the coming year: Dr. Wilson T. Phillips, president; Dr. Ernest M. Jordan, vice-president; Dr. Albert W. Horr, second vice-president; Dr. Clifford D. Harvey, secretary; Dr. Thomas M Strong, treasurer.

BEQUEST TO ST. LUKE'S HOSPITAL.—By the will of William Thompson of New Bedford, $3000 has been bequeathed to St. Luke's Hospital in New Bedford, and $1000 to the New Bedford Instructive Nursing Association.

INFLUENZA IN MILTON AND WHITMAN.—In Milton 110 cases of influenza and 4 deaths have been reported during the month to the Board of Health. There have been 2 deaths from pneumonia. In October, when the disease became reportable, there were only 46 cases, and in November there were 32. No decision has been reached concerning the closing of schools or churches.

In Whitman, it has been decided not to open the schools until December 30. Conditions are improving, and on December 15, only 21 cases of influenza were reported, although there were several cases of pneumonia and 1 death.

INFLUENZA EPIDEMIC.

INFLUENZA IN BOSTON AND MASSACHUSETTS.—Health Commissioner Woodward has issued a statement that the number of influenza cases reported daily, which show an increase over reports of a week ago, do not furnish a reliable basis from which to judge whether influenza may be increasing or decreasing, and that the daily report showing 672 new cases and 26 deaths, taken in connection with other sources of information, indicate that the disease is not advancing at an alarming rate. Cases are more numerous than they were a week ago, but the deaths are so comparatively few that the department has not seriously considered the closing of theatres, churches, schools, dance halls, and other places of assembly.

In speaking of the work of the Health Department, Commissioner Woodward is reported to have said in part:

"The Health Department has from the very first looked upon influenza as a disease spread by the secretions from the noses and throats of persons suffering from influenza, whether with a knowledge of their condition or not, and has endeavored as the only recognized rational method of preventing the spread of the disease to limit the spread of such secretions.

"To prevent the spread of nose and mouth secretions, the health department has proceeded along three lines: First, it has made an effort to educate the public as to the danger of crowds and of mouth secretions, and how to avoid such dangers. Second, it has endeavored to enforce, and to stimulate the enforcement of the anti-spitting statute, directly and through the police department; and it has promulgated and is enforcing a regulation requiring the adequate cleansing of glasses, cups and other utensils that the public mouths in public eating and drinking places. And third, it has made an effort to diminish by direct action the number and intimacy of personal contacts, by trying to provide more air space and better ventilation for passengers on the Elevated and in surface cars, and by closing schools, movies, saloons, and other places where intimacy of contact was more or less marked.

"The educational work of the Health Department has been carried on in part through the public press, and in part through posters and placards and leaflets that have been widely disseminated in English, Italian and Yiddish. The distribution of such posters, placards and leaflets is still going on.

"Another method resorted to by the Health Department to teach the danger of the secretions from the nose and mouth, and to teach methods of avoiding such danger, has been the sending of physicians and nurses into the homes of such patients as have been reported as suffering from influenza, to instruct such patients and those in attendance on them as to the precautions best calculated to limit the spread of infection.

"The increased vigor of the enforcement of the anti-spitting ordinance has been productive of results, although not to the extent that might have been hoped for. For the failure to obtain better results doubtless the form of the statute is in no small part to blame, inasmuch as a spitter cannot be arrested on the spot by the police officer who sees him commit the offence; but the name of the offender must then be procured by the officer, if possible, and a summons must be obtained and served, and later the officer must attend at the trial. There is little incentive to vigorous action on the part of a police officer in such a time-consuming process, nor can such a statute exert a maximum deterrent influence on the potential offender.

"The efforts of the Health Department to protect the community from the dangers of overcrowd~~ing on~~ the cars of the Boston Elevated and on the surface lines have led many persons to walk to and from work, all or part of the way, to the undoubted advantage of most of them, not only with respect to the avoidance of influenza, but also with respect to the improvement of their general health.

"The closing of theatres, movies, schools and other places was very frankly an emergency measure. It may have to be resorted to again. But it is so radical and far-reaching in its effects that it cannot be lightly undertaken.

"There are, of course, many agencies in addition to the Health Department that have been and are in positions to help in the prevention of influenza. Of such agencies none ranks higher in importance than the medical profession. A direct appeal has been made by letter to every member of the medical profession, asking their aid and pledging to them the assistance of the Department. It is, of course, with a view to assisting the physicians of the city in the treatment of their influenza patients that the department made its recent appeal for blood from recovered influenza-pneumonia patients, as the department has no patients under its own care. Similarly, with a view to helping the physician in preventing the spread of influenza in the families under his professional care, and at the same time thus procuring the aid of the physician in limiting the spread of the disease in the community, the department has spread broadcast instructions how to make and to use gauze masks, and has offered to furnish masks without cost, wherever necessary.

"A daily bulletin, an issue of about 500, showing the number of cases of influenza reported in each ward during the preceding 24 hours, is sent every morning to all schools, settlement houses, libraries, and hospitals in the city; and to the school committee there is sent each day a list, from 25 to 50 copies, containing the names and addresses of all children of school age reported during the same period as suffering from the disease.

"Cases reported as in need of medical attention, not infrequently during the height of the epidemic from the offices of physicians who themselves were unable to attend to the calls that had been left with them, have been and are being put into touch with the Health Department with appropriate medical relief. In cases of necessity medical inspectors in the service of the Health Department have had to look after such patients until some physician could be found who would assume, permanently, charge of the case.

"For the hospitals themselves, the Health Department acted as a clearing house during the height of the epidemic, and it is prepared and expected to do so again should need arise. It is at present in daily touch with the hospitals, with a view to having at all times an adequate supply of hospital beds."

New cases reported in Boston on December 31 include 624 of influenza and 10 of pneumonia, with 26 deaths from influenza and nine from pneumonia.

Reports received by the State Health Department on December 31 gave the total number of new cases as 1,927 for the preceding 24 hours, with 32 deaths. Officials said these reports indicate no change in the situation throughout the State. Natick reported two deaths, Springfield, four, and Deerfield and Northampton, one each.

New cases reported by the State Board were: Attleboro, 34; Fall River, 47; Falmouth, 21; Mattapoisett, 6; New Bedford, 36; Norton, 14; Plymouth, 47; Braintree, 44; Brockton, 26; Brookline, 36; Cambridge, 112; Hingham, 10; Norwood, 32; Rockland, 32; Danvers, 20; Gloucester, 34; Haverhill, 33; Lynn, 32; Malden, 44; Marblehead, 26; Melrose, 15; Swampscott, 15; Arlington, 37; Lowell, 38; Somerville, 42; Waltham, 110 (two days); Framingham, 14 (two days); Newton, 24; Wellesley, 14; Worcester, 76 (five days); Ayer, 5; Northampton, 32; Springfield, 36.

Other reports to the State Health Department, covering, for the most part, more than 24 hours, included 80 for Barnstable, 43 for Fall River, 35 for New Bedford, and two deaths; 29 from Provincetown, 21 from Swansea, 23 from Taunton, 53 from Braintree, in two days; 38 from Brockton, 30 from Brookline, 31 from Cambridge, 48 from Hingham, 31 from Quincy, 22 from Beverly, 32 from Danvers, 68 from Haverhill, 43 from Lynn, 24 from Merrimac, 15 from Salem, 15 from Stoneham, 50 from Lowell, 37 from Somerville, 20 from Waltham, 21 from Winchester, for two days; 31 from Woburn, for two days; 37 from Natick, and four deaths, for two days; 62 from Worcester, for two days; 56 from Fitchburg, 64 from Hudson, for three days; 47 from Lunenburg, for four days; 55 from Winchendon, for three days; 20 from Springfield, and two deaths, and 10 cases from Pittsfield.

Two deaths from pneumonia were reported from Quincy, where the recurrence of the epidemic is said to be causing considerable alarm. There are 40 new cases of influenza in this city.

Because of the large number of cases of influenza in Westboro, the public schools have been closed. In Beverly and Whitman, the schools have been reopened. The opening of Smith College was postponed until January 9, because of the prevalence of influenza.

Three Norwood physicians were arraigned recently in the Dedham court and were charged with violation of the health regulation requiring the reporting of all influenza cases. Severe action against all physicians who fail to report cases of influenza to the Board of Health is threatened by those in charge of the State-wide campaign to stamp out the disease.

It is reported that State Health Commissioner Kelley has made a statement recently to the effect that there are being reported daily from one-fifth to one-fourth the number of cases that were appearing during the height of the epidemic, and less than one-tenth the number of deaths.

INFLUENZA CASES FOR DECEMBER.—The total number of cases of influenza and pneumonia reported in Boston from December 1 to December 30, inclusive, was 5,994, including 5,725 of influenza and 269 of lobar pneumonia. The total deaths from the epidemic during the same period were 588, including 379 from influenza and 209 from all forms of pneumonia. The total deaths in Boston from influenza in December, 1917, were 4; from broncho-pneumonia, 49, and from lobar pneumonia, 100, making a total of 153.

STATEMENT OF COMMISSIONER WOODWARD.—In a statement issued on December 31, Commissioner Woodward is reported to have made the following remarks:

"Unless the deaths show a decided increase the department will do nothing drastic. To give any great promise of success special municipal ordinances designed to check the spread of influenza must be so drastic as to interfere seriously with the essential as well as the non-essential activities of the community. The experience of cities where such radical means have been attempted show that fully as much could certainly be accomplished if for the next 10 days people, out of consideration for themselves and others, would voluntarily refrain from any unnecessary social intercourse or travel, keep away from crowds, walk at least a part of the distance to work, and if they feel symptoms of a cold remain at home and observe, for the protection of their families, the precautions which the health department has been constantly reiterating. Every person who is himself infected with influenza will probably infect somebody else before he is sick enough to stop traveling, and every susceptible individual who avoids infection by avoiding crowds protects his family and the public, and helps break the chain that is keeping up the present sickness and deaths from the disease."

On January 2, 509 new cases of influenza and nine of pneumonia were reported to the Health Department for a period of 24 hours, with 28 deaths. These figures show a decrease over the number of cases, 672, reported for the preceding day. Reports for January 2 show even fewer cases, 479 new cases of influenza and 10 of pneumonia being the number reported, with 18 deaths; this is the lowest figure for the week.

Dr. Woodward believes that there are still many cases which are not being reported, because many persons having the disease have neither physician nor nurse in attendance. He thinks that the number given daily represents only about one-third of the actual cases. Dr. Woodward constantly reiterates his warning against sneezing, coughing and spitting. The emergency committee has also made plans for emphasizing the force of its anti-influenza appeals. It plans to impress its rules for preventing the spread of the disease through paid advertisements, if this proposal meets the approval of Mayor Peters. It has been found that moving pictures are willing to coöperate by showing warnings on their screens.

Dr. John J. Hurley has suggested the use of cotton pledgets in the nostrils as a preventive measure against infection. This has been recommended by the Health Department. Dr. Hurley has advised the use of bichloride absorbent cotton because of the germicidal properties of the bichloride incorporated in it, but any ordinary cotton of the same grade would be equally effective in arresting droplets of mucus that otherwise might be inhaled and find their way to the delicate mucous membrane lining the nose, there to set up a general influenza infection. Pledgets would not afford protection against infection through the mouth, but as most people breathe through the nose and not through the mouth, the value of pledgets as a preventive measure must be admitted.

In the opinion of four Boston physicians recently interviewed, influenza will probably remain until March or April. It was suggested as a remedy that the conditions prevailing in the streets and homes in the slums be improved, that returning soldiers should be quarantined, that the crowding on street cars be prevented, and that a contagious hospital be built in Boston.

Boston schools were reopened on January 2, and all precautions are being taken to prevent the spread of influenza among the children. Under the direction of Dr. Devine, 44 experienced school physicians and 40 nurses inspect the school children every morning and send home any who show symptoms of disease.

On January 3, 561 new cases of influenza with 30 deaths, and 24 new cases of lobar pneumonia with four deaths, were reported. This increase in the total number of cases is attributed by Health Commissioner Woodward to increased vigilance on the part of physicians in reporting.

Reports to the State Department of Health for the 24-hour period show 3,390 new cases of influenza and 52 deaths. In some places as many as five days are covered by the reports and a material proportion of the total includes more than one day.

Most important of the reports are the following: Attleboro, 52 cases (two days); Fall River, 46; New Bedford, 50 cases and five deaths; Plymouth, 11 (two days); Braintree, 33 cases (two days); Brockton, 281; Brookline, 53; Cambridge, 86; North Attleboro, 24 (two days); Norwood, 21 (two days); Walpole 36 (two days); Beverly, 97 (four days); Everett, 116 (four days); Haverhill, 77; Malden, 82; Manchester, 57 (two days); Melrose 46; Salem, 41; Arlington, 54 (two days); Belmont, 13; Lawrence 47; Lowell, 35; Somerville, 128; Waltham, 26; Watertown, 22; Winchester, 30 (two days); Woburn, 28; Douglas, 34 (three days); Grafton, 38; Natick, 62 (two days); Newton, 37; Worcester, 145 (several days); Clinton, 25; Northampton, 23 cases and one death; Springfield, 22 cases and five deaths; Wilbraham, 21 cases (five days); Greenfield, 15.

The health officials of this State say that every known means of battling influenza has been tried but that until the organism of the disease and the method of infection are known, not much can be expected in conquering it.

Health officials state that the number of cases being reported falls far below the number reported in the epidemic of the summer and fall. They believe that many cases are being reported as influenza which are nothing more serious than colds.

On January 3 there were 17 new cases of influenza reported in Attleboro.

On January 4, 449 new cases of influenza and 10 of pneumonia were reported in Boston; deaths from influenza numbered 23 and from pneumonia, 7.

Only 232 cases of influenza and 23 deaths, and 13 cases of pneumonia with seven deaths were reported in Boston on January 5.

On January 6, 164 cases and 25 deaths were reported, with two new lobar pneumonia cases and four deaths. Further proof of improvement in the situation generally is furnished by the fact that applications for transfer of patients to hospitals and for nurses have become less numerous in the past two days. The Health Department's returns on January 6 show that there are 72 vacant beds available in Boston for the reception of influenza patients.

The State Department of Health announced on January 6 that reports of influenza cases were made by 78 cities and towns, and while 2,251 cases were reported, 533 of these came from communities which sent in reports covering from two days to one month. Health authorities are gratified at the small number of deaths reported outside Boston.

Deaths reported were: Springfield, one; Northampton, one; and Dennis, one.

New cases reported were: from Fall River, 49; Boston, 449; Haverhill, 70; Lynn, 44; Malden, 65; Saugus, 135; Lowell, 63; Medford, 53; Somerville, 94; Waltham, 55; Watertown, 34; Newton, 103; Worcester, 60; Fitchburg, 71; Leominster, 51; Springfield, 15.

Schools have been reopened in Brookline. Doctors and nurses examine the children regularly and send home all those who show the slightest indications of influenza or who have illness in the families at home.

On January 7, there were reported in Boston 213 new cases of influenza and 31 deaths, with 10 new lobar pneumonia cases and 11 deaths of this disease. Influenza deaths for the past four days have been, respectively, 33, 23, 25, 31, and for lobar pneumonia, 15, 7, 4, and 11.

Although 2,251 new cases of influenza were reported to the State Department of Health on January 7, only three deaths were recorded in the entire Commonwealth, with the exception of Boston.

Deaths reported were: from Boston, 33; Springfield, one; Northampton, one; Dennis, one.

New cases reported were: Fall River, 49; Boston, 449; Haverhill, 70; Lynn, 44; Malden, 65; Saugus, 135; Lowell, 63; Medford.

53; Somerville, 94; Waltham, 55; Watertown, 34; Newton, 103; Worcester, 60; Fitchburg, 71; Leominster, 51; Springfield, 15.

These reports indicate that the recurrence of the influenza outbreak is now on the wane, and the situation throughout Massachusetts is more encouraging than at any time since December.

The report for the week ending January 4 includes 3,558 cases of influenza in Boston and vicinity; but there were only 191 deaths, of which 35 were non-residents. There were 83 cases of lobar pneumonia and 53 deaths from pneumonia, both bronchial and pneumonia.

STATE-WIDE TEST OF SERUM.—State Health Commissioner Eugene R. Kelley has announced the appointment of a committee of physicians to make arrangements for the use of a blood serum for treating influenza-pneumonia cases throughout the State. In discussing the present situation, he is reported to have made the following remarks:

"In my opinion the influenza situation in the State is as follows: We are having reported daily from one-fifth to one-quarter the number of cases that were appearing during the height of the epidemic. We are having less than one-tenth the number of deaths reported daily, as compared with the same period. As nearly as we can estimate we are having two to three times the number of cases reported that we have been having each winter since the 1888-9 epidemic. These statistics show on their face one of two things, either that the serious cases are much fewer in number, or that many very mild or doubtful cases are being reported by physicians. As a matter of fact, we believe both are true, basing our opinions on reports from boards of health and from individual physicians who are unanimous in the statement that the general run of cases at present is very mild and brief.

"During the epidemic, a method of treating the influenza-pneumonia cases with blood serum taken from a convalescent influenza-pneumonia case seems to have proved its value. Plans are nearly perfected for the preparation and use of this serum in hospitals distributed throughout the State. The process of preparation is delicate and obtaining the serum depends on the coöperation of recently convalescent cases of influenza-pneumonia. Details will be made public at the earliest possible moment.

"The influenza is still with us in more than its normal amount, but fortunately in a comparatively mild form. We must expect many cases and some deaths from the disease this winter. The exercise of ordinary common sense by each individual is our real personal protection."

On January 2, Commissioner Kelley of the State Health Board requested the Homeopathic Hospital to furnish him with a number of bacteriologists for tests and to make serum.

SOCIETY NOTICES.

NEW ENGLAND PEDIATRIC SOCIETY.—There will be a meeting of the New England Pediatric Society on Friday, Jan. 24, 1919, in the Amphitheatre of the Children's Hospital, Longwood Avenue, at 4.30 P.M.

Clinical cases will be presented by John Lovett Morse, M.D., Boston; William E. Ladd, M.D., Boston; and Robert W. Lovett, M.D., Boston.

WILLIAM E. LADD, M.D., *President*.
RICHARD M. SMITH, M.D., *Secretary*.

THE NORFOLK DISTRICT MEDICAL SOCIETY.—A regular meeting of the Society will be held at the Roxbury Masonic Temple, 171 Warren Street, January 28, at 8.00 P.M.

COMMUNICATIONS.

Repeated Caesarean Sections. Frederick L. Good, M.D.
A Few Thoughts on Caesarean Section.
Thomas F. Greene, M.D.
Preparation and After-Care of the Patient.
Anna Conlogue, R.N.
Discussion. Frank W. Sleeper, M.D.

BRADFORD KENT, M.D., *Secretary*.

RECENT DEATHS.

DR. WILLIAM G. ADAMS died recently at his home in Boston. He was born in Boston in 1873. He was graduated from Harvard Medical School with the class of 1897. During the years 1898 and 1899, Dr. Adams was house surgeon at the Boston City Hospital, and later was instructor at Tufts Medical School for eight years. His subsequent practice was confined to surgery, but because of failing health, he had not been active in his profession recently.

DR. H. L. DEARING died, after a short illness due to influenza, at his home in Braintree on December 30. Dr. Dearing was 56 years old. He began his study under the direction of his father, completed his medical education in New York at the Bellevue Hospital Medical College, from which he was graduated in 1890, and later went to Europe and studied in hospitals there. He began to practise in Braintree in 1891. At one time Dr. Dearing was surgeon of the 5th Massachusetts Infantry. He was a member of the American and Massachusetts Medical Societies.

DR. WILLIAM G. CURTIS died at his home in Everett on January 1, at the age of 27 years. He was graduated from Tufts Dental School in 1914, and had since been practising in Everett.

DR. O. A. EVERETT died recently at his home in Bolton. He was the only physician in the town, and after devoting his entire energy for weeks in the care of cases of influenza, finally became ill with the disease. He was fifty-eight years old and a graduate of Dartmouth College and Harvard Medical School.

DR. WALTER D. WILLIAMSON, major surgeon at the Maine General Hospital, died at his home in Portland, Me., on June 2. He was born in Milan, N. H., and was graduated from the University of Vermont Medical School. He practised in Milan, Gorham and Berlin, N. H. He was a member of the Maine Medical Society.